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Filed Electronically

November 23, 2020

Kimberly D. Bose, Secretary
Nathaniel J. Davis, Sr., Deputy Secretary
Federal Energy Regulatory Commission
825 First Street, N.E.
Washington, D.C. 20426

Subject: Bishop Creek Hydroelectric Project, FERC Project No. 1394
Initial Study Report Meeting Summary

Southern California Edison Company (SCE) hereby files with the Federal Energy Regulatory Commission (FERC) its Initial Study Report Meeting Summary for the Bishop Creek Project (Project No. 1394).

Pursuant to 18 Code of Federal Regulation (CFR) 5.15(c) an Initial Study Report (ISR) and ISR meeting marks the 1-year anniversary of the Study Plan Determination. SCE held a virtual ISR Meeting via Microsoft Teams on November 10, 2020 from 9am – 2pm PST.

SCE has successfully completed the first year of relicensing studies consistent with the Revised Study Plans filed with FERC on August 29, 2019. Minor variances to study methodologies were necessary to accommodate circumstances encountered during study implementation including responding to the COVID-19 pandemic and the wildfires surrounding the Project Area. These minor variances were discussed with the TWG members and documented in the individual study sections of the ISR. SCE is not proposing any additional studies for the Project at this time. Following up on comments received during the ISR meeting, SCE is including the following attachments to this meeting summary filing:

- ISR Meeting PowerPoint Presentation
- Bishop Creek Reservoir Fish Survey Analysis (Opercula and Fish Scales) Update
- Bishop Creek Riparian Study Area Clarification
- Bishop Creek Amphibian Survey Status
- Bishop Creek Goshawk Survey Status

Pursuant to 18 CFR 5.15(c)(3), if there is any disagreement with this meeting summary, and/or any proposed modifications to ongoing studies or new studies, any stakeholder may provide comments to FERC within 30-days of this filing.

Following the acceptance of this filing, SCE will forward the "Acceptance for Filing" e-mail generated by FERC's e-filing service to all contacts on the distribution list via e-mail. This filing, along with attachments, will also be placed on SCE's Bishop Creek Relicensing Website (www.sce.com/bishopcreek) where it will be available for download, and available for review by appointment at the Bishop Creek Hydro Headquarters Office – 4000 E. Bishop Creek Road, Bishop, CA 93514.

SCE looks forward to continuing to work with FERC and other interested parties on the Bishop Creek relicensing. Should there be any questions or concerns regarding this filing please contact

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Matthew Woodhall, Senior Regulatory Advisor, by phone at (626) 302-9596 or via e-mail at matthew.woodhall@sce.com.

Sincerely,

DocuSigned by:
Wayne Allen
106CF18A73D445F...

Wayne P. Allen
Principal Manager

Attachments:

- ISR Meeting PowerPoint Presentation
- Meeting Summary with technical memoranda
    - Bishop Creek Reservoir Fish Survey Analysis Update
    - Bishop Creek Riparian Study Area Clarification
    - Bishop Creek Amphibian Survey Status
    - Bishop Creek Goshawk Survey Status

MEETING SUMMARY*
BISHOP CREEK HYDROELECTRIC PROJECT
TECHNICAL WORKING GROUP UPDATES
FERC PROJECT NO. 1394

DATE: November 10, 2020, 9:00 a.m. - 2:00 p.m.
LOCATION: Conference Call/Webinar
Topics: Water Quality, Fish and Aquatics, Sediment, Operations, Recreation, Botanical, and Wildlife Studies

**These meeting notes are documentation of general discussions from the meeting held on the above-noted date. These notes are not a verbatim account of proceedings, are not meeting minutes, and do not represent any final decisions or official documentation for the project or participating agencies.*

1.0 OBJECTIVE

- Update public stakeholders on the relicensing process and accept any feedback
- Provide an opportunity for stakeholder/TWG questions about the study results described in the Initial Study Report
- Confirm process for requesting new studies or modifications to existing studies

2.0 ATTENDEES

Relicensing Team Members
Lyle Laven, SCE
Martin Ostendorf, SCE
Al Partridge, SCE
Nicolas Von Gersdorff, SCE
Audry Williams, SCE
Matt Woodhall, SCE
Finlay Anderson, Kleinschmidt
Michael Donovan, Kleinschmidt
Matt Harper, Kleinschmidt
Bret Hoffman, Kleinschmidt
Tyler Kreider, Kleinschmidt
Brandon Kulik, Kleinschmidt
Kelly Larimer, Kleinschmidt
Shannon Luoma, Kleinschmidt
Steve Norton, Psomas
Brad Blood, Psomas
Edith Read, E. Read and Associates
Lynn Compas, Historical Research Associates
Shelly Davis-King, Davis-King Associates
Ken Jarrett, Stillwater Sciences

Technical Working Group Members & Interested Stakeholders
Ron Phillips, Bishop City Council
Greg Haverstock, BLM
Nick Buckmaster, CDFW
Alyssa Marquez, CDFW
Steve Parmenter, CDFW
Brandy Wood, CDFW
James Hastreiter, FERC
Khatoon Melick, FERC
Kyle Olcott, FERC
Frank Winchell, FERC

Kelly Wolcott, FERC
Stephen Bowes, NPS
Ashley Blythe Haverstock, USFS
Philip DeSenze, USFS
Blake Englehardt, USFS
Sheila Irons, USFS
Tristan Leong, USFS
Diana Pietrasanta, USFS
Kary Schlick, USFS
Dan Yarbrough, USFS
Nathan Sill, USFS
Heather Beeler, USFWS
Ed Hancock, Water Board
Sarah Bliss

Facilitation Team
Terra Alpaugh, Kearns & West
Mike Harty, Kearns & West
Kai Walcott, Kearns & West

3.0 COMPILED ACTION ITEMS

- Items for Immediate Follow Up:
    - Relicensing Team:
        - Try to file meeting summary with FERC before the 15-day deadline to allow stakeholders time to comment before the winter holidays.
        - Schedule conversation with Nick Buckmaster (CDFW) and Kary Schlick (USFS) to determine how to amend/adapt the fish distribution study given that CDFW staff will not be available to do the analysis of trout scale and sucker operculum samples outlined in the Study Plan.
        - Provide consultation record of conversations with the USFS regarding the timing and ultimately, the elimination of the Species-specific Northern Goshawk Survey; provide as an appendix to the meeting summary.
        - Edith Read (E. Read and Associates) will include a clarification about riparian monitoring sites included in the Initial Study Report (IRS) and its figures; include an explanation in meeting notes and in the Study Report.
        - Edith Read (E. Read and Associates) will make corrections to the Special Status Plan Table to update Forest Service language pertaining to special status species, I.e. Species of Conservation Concern (SCC) and remove references to the Forest Service Sensitive status.
        - Edith Read will add *Lepidium appelianum* to the table of invasive plant species observed.
        - Brad Blood (Psomas) will provide a list of species using the guzzlers; send to Kary (USFS) and provide as appendix to the meeting summary.
        - Brad Blood (Psomas) will investigate the estimated size of the beaver population and share with Ed Hancock.
        - Ed Hancock (Water Board) will reach out directly to Inyo NF/Inyo County to request information on the size of the mule deer population.
    - Sheila Irons (USFS) will reach out to Matt Harper (Kleinschmidt) with appropriate contact to get the Recreation Survey linked to the Forest Service website.

- Follow up on technical reports:
    - Relicensing Team:
        - Bret Hoffman (Kleinschmidt) will incorporate a performance metric to assist with the QA/QC of the model.
        - Provide SCE's Avian Protection Plan as part of the PLP and FLA.

        - Will plan to issue final study reports in batches with their quarterly progress reports; USFS requested that any consultation needs be addressed as they arise, rather than waiting and requesting input on all the studies at one time.
    - Nick Buckmaster (CDFW) has provided a link to the most current trout plan; the Relicensing Team will reference those standards in the report.
    - Nathan Sill and Kary Schlick (USFS) will provide feedback on whether fish distribution meets USFS's desired conditions.
    - Shelly Davis- King to reach out to Matt Harper once she has additional information about historic and potentially ongoing Native American use of a trail near Lake Sabrina.

4.0 INTRODUCTION & GENERAL QUESTIONS

The meeting was divided into subject-specific blocks, and participants were able to join the webinar at the appropriate interval(s) to discuss whichever study plans aligned with their subject matter expertise. Given that this meeting was a FERC process milestone Finlay Anderson, the Kleinschmidt Relicensing Team ("Team") Lead, provided an overview of the relicensing process and highlighted that the meeting's purpose was to answer questions about study plan implementation and results to date.

Based on the information shared in the meeting and review of the Initial Study Report, stakeholders can submit requests to modify studies or to add new studies. Finlay described the criteria for these requests [see 18 CFR 5.15(d)]: for a study modification, the requestor should demonstrate that the approved studies were not conducted as provided for in the approved study plan, or the study was conducted under anomalous environmental conditions or that environmental conditions have changed in a material way. For a new study, the requestor should explain any material changes in the law or regulations applicable to the information request; why the goals and objectives of any approved study could not be met with the approved study methodology; why the request was not made earlier; significant changes in the project proposal or that significant new information material to the study objectives has become available; and why the new study request satisfies the study criteria in 18 CFR §5.9(b).

Finlay explained the FERC-mandated timeline for these requests: SCE will file a meeting summary within 15 days of this meeting with FERC; comments on the meeting summary and requests for study modifications and new studies will be due within 30 days of that filing date; and SCE will then have 30 days to respond. Finlay noted that they would endeavor to submit a meeting summary as early as possible to prevent overlap of the comment period with the winter holiday.

For each study plan, the Team resource-area lead presented the plan's purpose, status, initial results, modifications from the approved plan, and upcoming activities. The presentation slides are available on the project website and are included here as Attachment 1. The summary below identifies any modifications that were made to the methods of each study as outlined in the study plan and focuses on questions and comments from participants, including recommendations on study modifications, and any action items that resulted from the conversation (all of which are compiled in Section 3.0 above).

NOTE: In order to facilitate FERC's review of the ISR and these notes, our the summaries below specify if deviations from the study plan are proposed as identified "variances" (minor deviations that don't impact the ability of SCE to achieve study pan goals and objectives) or "modifications" (significant changes to the study that impacts ability to meet study objectives).

There were no questions before the start of the presentations.

5.0 WATER QUALITY STUDY (AQ 5)

5.1 MODIFICATION OR VARIANCES FROM THE APPROVED PLAN

The SNARL lab was not available to process the water quality samples due to COVID closures. Therefore, after consultation with the Water Board, the Relicensing Team used Weck Laboratories to process the samples. The Team considers this to be a non-substantive variance from the approved implementation plan.

5.2 QUESTIONS & COMMENTS

Michael Donovan, Psomas, presented the results of the Water Quality Study Plan. Questions and comments from participants included:

- Question (Q) (USFS): Is there a risk that the low *E. coli* detection was a result of the shortened recreation season caused by COVID-19 and the fires?
  - Response (R) (Psomas): There was a lot of activity in the lake, except for the very beginning and possibly the end of the season, when the recreational areas were closed because of COVID-19 and then the fires. Our team observed that the area was active, with campgrounds and boats on the lake, which is why we selected the period from July to August.
- Q (Water Board): When will the next progress report be produced?
  - R (Kleinschmidt): Since the first progress report was issued mid-February of this year, it would be an appropriate time to target for the next report. That will also be the time when we will be gearing up for the next field season and after we have reviewed Study Plan revisions following this meeting. That report will include whatever additional data has been gone through QA/QC at that point.

5.3 ACTION ITEMS

- There were no action items in this section.

6.0 BISHOP CREEK RESERVOIRS FISH DISTRIBUTION STUDY (AQ 4)

6.1 MODIFICATION OR VARIANCES FROM THE APPROVED PLAN

There were two minor variances to the study plan in practice. The study plan defined a broad window in which to search for Owens suckers during their spawning activities; because spawning occurred early in that window, the Team reduced the sampling period after a sufficient number of suckers was captured (n=105). Second, due to wildfire danger, the Team shortened the gill net set times at Longley Lake slightly. They do not feel this affected the effectiveness of the catch given that they still included the times of day when trout species are most active (i.e., evening, night, and dawn hours).

As discussed in questions and comments section below, an additional variance is proposed based on changes in availability from CDFW to process scale and opercula samples.

6.2 QUESTIONS & COMMENTS

Brandon Kulik, Kleinschmidt, presented the Fish Distribution Reservoir Baseline Study. Questions and comments from participants included:

- C (Kleinschmidt): The Team would like to acknowledge Stillwater Sciences and the Forest Service for their assistance and willingness to coordinate during this difficult year.
- Q (Kleinschmidt): Could someone from CDFW coordinate with the Team to receive and complete the analysis of the trout scales and sucker operculum samples as outlined in the study plan?
    - R (CDFW): CDFW will be unable to complete the analysis due to staff turnover and may submit a study change request as a result. We can schedule a call to discuss how to amend/adapt the fish distribution study.
    - C (Kleinschmidt): Yes, we can discuss the analysis and then coordinate with FERC on the updated methods.
    - C (USFS): Please include Kary Schlick (USFS) on the call. **[ACTION ITEM.** Note that for purposes of identifying a potential variance to the approved study plan, SCE proposes that the opercula and scale sampling discussed in the plan be cancelled – Attachment 2 discusses the rational for this proposal. SCE will schedule a call with the USFS and CDFW to discuss further. The call will take place in time for TWG members to provide comments on these notes pursuant to 18 CFR 5.15(c)(4)**]**

6.3 ACTION ITEMS

- Kleinschmidt will schedule a conversation with Nick Buckmaster (CDFW) and Kary Schlick (USFS) to determine how to amend/adapt the fish distribution study given that CDFW staff will not be available to do the analysis of trout scale and sucker operculum samples outlined in the Study Plan.

7.0 ASSESSMENT OF BISHOP CREEK RIPARIAN COMMUNITY STUDY (TERR 1)

7.1 MODIFICATIONS/VARIANCES FROM THE APPROVED PLAN

The Relicensing Team reported no variances or modifications to methods for this study Plan. No additional field work is anticipated for the duration of this relicensing process. Following the ISR meeting, authors will work to finalize technical reports provided no additional survey work is identified.

7.2 QUESTIONS AND COMMENTS

Edith Read, E. Read and Associates, presented on the Riparian Study. Questions and comments from participants included:

- Q (FERC): The monitoring sites in 3.4-1 of the ISR do not match the proposed study sites in Figure 2.1 of the Revised Study Plan, which was approved in the Study Plan Determination (SPD). It looks like Monitoring sites 1,2, and 6 from Figure 2.1 in the Revised Study Plan (RSP) do not appear in Figure 3.4-1 of the ISR which shows the study sites/area for this study, even though the Methods section does not mention a variance. Please explain this discrepancy.

    - R (E. Read and Associates): The Study Plan Area represented in the approved study plan is not correct. The reason monitoring sites 1,2 and 6 are not shown is because those sites were removed from the monitoring program with the Forest Service and FERC's approval as they were not yielding meaningful results. As such, for this study, the focus remained on sites that were in the program through 2019 in order to have a complete, consistent data set.
    - C (Kleinschmidt): This will be clarified in the meeting notes with an updated figure (see Attachment 3) and updated in the Study Report. **[ACTION]**
- Q (USFS): Could you clarify if the reaches were historically dry or historically perennial?
    - R (E. Read and Associates): The term historical refers to the 1991-1993 baseline period, i.e., post-project but prior to implementation of the minimum instream flow program under the existing license. In 1991 and 1992, the reaches between Plants 4 and 5 were summer-dry. The third and last baseline year (1993) was wetter than normal and had summer flow. But since the minimum instream flow release program was implemented beginning in 1994, these reaches have had perennial flow during the summer.
- Q (USFS) Are there reaches that artificially have water now that would not have water without the project?
    - R (E. Read and Associates): That is unclear as there is no good data for the period before the project. The original monitoring site selection was based on previous site selection conducted by a consulting group in the late 1980s. That group attempted to examine the riparian condition above and below the dams as a way of assessing possible project effects and felt that below dam reaches would be more sensitive to instream flow releases than upstream reaches.
- C (USFS): I am trying to determine the target and reasonable objective for the site we are monitoring.
    - R (E. Read and Associates): That was a question that was previously posed by the Forest Service, which conducted a study of site potential for eastern Sierra streams (independent of relicensing) -- i.e., what would the ideal condition of the sites be, given the project? The study asked about when would one know this condition was reached and monitoring could be discontinued? However, conclusions in this regard were not reached that are clearly appliable to Bishop Creek. The Riparian study (TERR 1) will not resolve this question, however in the context of reviewing the proposed Project for consistency with the land manager's objectives for the Inyo National Forest, the team will continue to consult with the forest service about the desired future conditions for Bishop Creek.
- C (USFS): Were the inflow regimes designed to attain the natural flow regime or to put water in?
    - R (E. Read and Associates): My recollection is that the instream flow volumes were based on fish.
    - C (SCE): When the last license was issued, there were no instream flow releases and everyone realized that there should be something there. SCE has dialed in the flow releases to attempt to be ecologically favorable to plants and animals. This is what has been landed on over multiple years of review and after overlaying all the issues to see if there is room for improvement.
    - C (CDFW): The previous flow regime was not really based on fish. The results of the flow and fish studies were not implemented to any extent. It is unclear where the flow regime came from based on the data that is available.
- C (USFS): The Black Cottonwood may or may not be a good indicator. I want to ensure we are collecting the right data to have an informed discussion down the road.

7.3 ACTION ITEMS

- Edith Read will include clarification of the riparian monitoring sites and figures in the meeting notes and Study Report.

8.0 BISHOP CREEK FISH DISTIBUTION BASELINE STUDY (AQ 3)

8.1 MODIFICATION OR VARIANCES FROM THE APPROVED PLAN

There were no modifications or variations to the methods of this study plan; no additional field work is anticipated.

8.2 QUESTIONS AND COMMENTS

Brandon Kulik, Kleinschmidt, presented on the Creek Fish Distribution Baseline Study. Questions and comments from participants included:

- Q (CDFW): The final report table noted that the fish instream met the requirements of the Forest Land Management Plan. Did the Forest Service weigh in on this?
    - R (Kleinschmidt): No, the Team has yet to receive formal input from the Forest Service. That assessment was based on the Team's professional judgement in comparing USFS management goals to the study results.
    - C (CDFW): It does not meet CDFW's management goals, at least not for instream. Typically, for a stream to be a satisfactory fishery, it needs to produce fish up to and exceeding 8 inches. This is a statewide standard and is not specific to Bishop Creek.
    - Q (Kleinschmidt): Is there a public management plan that references those goals?
    - C (CDFW): All fisheries' objectives are on the State CDFW website. There is the Bishop Creek Aquatic Biodiversity Master Plan and angling objectives are set in regional fisheries documents. Though they have not been updated for a while, they are still considered current.
    - C (Kleinschmidt): The Team will make sure we have all those in our library and are referencing them as appropriate. **[ACTION ITEM]**
    - C (USFS): From the presentation, it looks like the study objectives may meet the intent of some of the Forest Land Management Plan components, specifically the desired conditions, but we will confirm this. **[ACTION ITEM]**

8.3 ACTION ITEMS

- CDFW will provide a link to the most current trout plan **(DONE),** and the Relicensing Team will reference those standards in the report.
- USFS (Nathan Sill and Kary Schlick) will provide feedback on whether fish distribution meets USFS desired conditions.

9.0 SEDIMENT AND GEOMORPHOLOGY STUDY (AQ 6)

9.1 MODIFICATION OR VARIANCES FROM THE APPROVED PLAN

Bedload sampling was determined not to be feasible. In order to answer outstanding questions about sediment mobility, SCE has implemented a tracer rock study during higher flows to provide information on what flows mobilize substrates in Bishop Creek. SCE considers this a variance to the proposed study plan, rather than a study plan modification. SCE proposed the change in methods at the TWG meeting in May 2020, and no concerns were raised.

9.2 QUESTIONS AND COMMENTS

Tyler Kreider, Kleinschmidt, presented the Sediment and Geomorphology Study. Questions and comments from participants included:

- Q (FERC): To clarify, is this Tracer Rock Study a proposed new study the Team will be seeking a determination on from FERC?
    - R (Kleinschmidt): This was a variance that we consulted on with USFS and stakeholders last spring when it became apparent that the current approach was untenable; the adjusted approach was included in May's progress report. Let us know if the Team needed to have done something different when notifying FERC.
    - C (FERC): That is accurate – it is a variance, and the Team consulted with USFS and CDFW. This was clearly the only alternative technique to meet the objective.
- Q (USFS): What's the intake screen (mesh) size? Is that explained anywhere in reference to this study, i.e. maximum substrate passable size? Also is their orientation / elevation effects considered in relation to the finer material? It does not seem surprising that finer materials are moving through the intake.
    - R (Kleinschmidt): The intake sediment is the material that settled out in the impoundment above the intake, not through the intake screens that filter out debris from the water entering the powerhouse. This is from the impoundment itself.
- Q (USFS): Is there enough information here to start looking at the effects of various flows on the transportation of different particle sizes?
    - R (Kleinschmidt): To date, we are seeing that smaller materials are going through the system and settling out in the stiller water in the impoundments. Riffles are generally 150-600 mm particles, while impoundment sediment is <6 mm, so release of any sediment from the impoundment is anticipated to move through the system and would not be ideal spawning substrate. With the tracer rock study, we will be able to confirm what size particles are being mobilized during higher flows. This will inform particle transport at various flows, when combined with other data from this study.
- Q (USFS): Are considerations being made for future dredging needs? For instance, could SCE alleviate the need for some dredging by changing flows and thereby, minimizing the accumulation of sediment?
    - R (Kleinschmidt): Those considerations have been made.
- C (CDFW): I like the direction of the sediment study and have no concerns.

9.3 ACTION ITEMS

- There were no action items in this section.

10.0 BISHOP CREEK OPERATION MODELING (AQ 2)

10.1 MODIFICATION OR VARIANCES FROM THE APPROVED PLAN

There were no modifications or variances to no modifications or variances to the methods of this study plan.

10.2 QUESTIONS AND COMMENTS

Bret Hoffman, Kleinschmidt, presented the work on the Operations Model. Questions and comments from participants included:

- Q (USFS): Will the model include model FERC flows as validation or performance metric, i.e., will it use known years of operations as the base case in the initial roll-out?
    - R (Kleinschmidt): Yes, we can do that. Do you mean month-to-month of what flows and storage actually occurred versus the base measure?
    - Q (USFS): We are more interested in whether the assessment will identify any errors. How are you going to roll-out the QA/QC of the model?
    - R (Kleinschmidt): We need to be careful not to conflate predictive ability of the model with the compliance history, which is a separate question that won't be answered with the model (compliance is addressed in the FERC record where flow variances are noted). We have thought about this question a lot and want to be clear about what that performance metric will look like. As we develop the input and output process, we will need stakeholder input to workshop these questions, so that everyone understands and feels confident about the performance metric.
    - C (USFS): It would be helpful if you could provide detail about the model's sensitivity to different water years.
    - R (Kleinschmidt): We can examine performance and parse it into water year categories. The model already has three types of water years so we can do metrics that are broken down into those categories.

10.3 ACTION ITEMS

- Brett Hoffman will incorporate a performance metric to assist with the QA/QC of the Operations Model.

11.0 CULTURAL AND TRIBAL RESOURCE STUDIES (CUL 1 AND CUL 2)

11.1 MODIFICATION OR VARIANCES FROM THE APPROVED PLAN

For both the Cultural and Tribal Studies, there were no modification or variances to study plan methods. Due to COVID-19 and air quality due to wildfires, the field schedule was delayed and interviews with tribes and tribal elders were postponed. For the cultural studies, any portions of the surveys not conducted in 2020 will be completed in 2021 along with National Register of Historic Places evaluations of the archaeological sites and built environmental resources. For the tribal studies, interviews surrounding flowering season are now planned for Spring 2021.

11.2 QUESTIONS AND COMMENTS

Audry Williams, SCE, presented both Cultural and Tribal Resource Studies. Questions and comments from participants included:

- C (USFS): Thanks for the update. There are no recommended study modifications from USFS.
- C (Kleinschmidt): We appreciate USFS accommodating our survey schedule, especially in challenging situations. We have gotten most of what needs to be done, done.
- C (HRA Associates): Survey crews finished the survey today and will have additional information in the coming weeks.
- C (FERC): FERC appreciates the hard work the field crews have done so far.

11.3 ACTION ITEMS

- There were no action items in this section.

12.0 INVASIVE, THREATENED, AND ENDANGERED PLANTS STUDIES (TERR 2 AND TERR 3)

12.1 MODIFICATION OR VARIANCES FROM THE APPROVED PLAN

There were no modifications or variances to methods for the invasive or special status plants studies.

12.2 QUESTIONS AND COMMENTS

Edith Read, E. Read and Associates, presented on the Invasive, Threatened and Endangered Plants Studies. Questions and comments from participants included:

- C (E. Read and Associates): There is an error on the California Invasive Plant Species website of a plant that was observed around Plant 4, and I would anticipate adding that to the next iteration of the Study Report.
- Q (CDFW): Do you think that black locusts could have been intentionally transplanted?
    - R (E. Read and Associates): Possibly, maybe because it has pretty flowers.
    - C (USFS): It could be a historic resource.
- C (USFS): The TERR 3 Data Summary table needs to be updated with the Forest Service Species of Conservation Concern (SCC) status. The reference to Forest Service Sensitive status should be removed since the Forest Service now uses the term Species of Conservation Concern. This would add a federal status for some additional species that were in that table. **[ACTION ITEM]**
    - R (E. Read and Associates): Okay. We will also look for changes in listing status and for new listings between now and the end of next year. The only additional survey I can imagine is if something gets listed; white bark pine is the only plant currently being considered for listing that overlaps with the project area.
- The following update was provided via email in reference to the Invasive Plants section: USFS confirmed with the California Invasive Plants Council (CAL-IPC) that the omission of a particular species of *Lepidium* (*appelianum*) from the on-line table was an error. The Relicensing Team is relying on this table as a means of prioritizing which invasives to focus on. Therefore, the next iteration of the invasives section will need to add *Lepidium appelianum* to the table of species observed. It was seen as a weed in the landscaping around Plant 4 and nowhere else. [**ACTION ITEM]**

12.3 ACTION ITEMS

- Edith Read will make corrections to the Special Status Plan Table to include Forest Service Species of Conservation Concern and remove references to the Forest Service Sensitive status.
- Edith Read will add *Lepidium appelianum* to the table of invasive species observed.

13.0 BISHOP CREEK INSTREAM FLOW NEEDS ASSESSMENT STUDY (AQ 1)

13.1 MODIFICATION OR VARIANCES FROM THE APPROVED PLAN

There were no modifications or variances to the methods of this study plan.

13.2 QUESTIONS AND COMMENTS

Brandon Kulik, Kleinschmidt, presented on Instream Flow Studies. Questions and comments from participants included:

- C (CFSW): The study looks good.

13.3 ACTION ITEMS

- There were no action items in this section.

14.0 RECREATION USE AND NEEDS STUDY (REC 1)

14.1 MODIFICATION OR VARIANCES FROM THE APPROVED PLAN

Due to scheduled road work on South Lake Road, SCE developed a revised implementation schedule for the REC 1 study plan in consultation with the USFS that moves the general recreation field surveys to the 2021 recreation season. The onset of the COVID-19 pandemic further supported the decision to postpone this study. SCE considers this to be a variance to the approved study plan methods.

14.2 QUESTIONS AND COMMENTS

Matthew Harper, Kleinschmidt, presented the Recreation Use Study. Questions and comments from participants included:

- Q (USFS): Can Forest Service staff secure a weblink or determine how to add the Recreation Survey on its web portal?
    - R (Kleinschmidt): There is a link to the survey on the website (www.sce.com/bishopcreek), but we can coordinate to get the survey on the Forest Service's website as well (please use this link to access survey).
    - C (USFS): Coordinate with Sheila Irons. **[ACTION ITEM]**

14.3 ACTION ITEMS

- Sheila Irons will coordinate with Matt Harper to get the Recreation Survey linked to the Forest Service website.

15.0 RECREATION FACILITIES CONDITIONS AND PUBLIC ACCESSIBILITY STUDY (REC 2)

15.1 MODIFICATION OR VARIANCES FROM THE APPROVED PLAN

There were no modifications or variances to the approved methods of this study plan.

15.2 QUESTIONS AND COMMENTS

Matthew Harper, Kleinschmidt, presented on the Recreation Facilities Conditions and Public Accessibilities Study. Questions and comments from participants included:

- Q (USFS): Will REC 2 provide a map of all the dispersed use sites that were found?
    - R (Kleinschmidt): Yes, the Technical Report will be map heavy. GIS data can also be shared if that is more helpful.
- C (Shelly Davis-King): Note that there is a trail at Lake Sabrina which has historically been, and could potentially still be, used by Native Americans. Tribal leaders have not yet been interviewed about it, but once this information has been gathered, we should coordinate. **[ACTION ITEM]**

15.3 ACTION ITEMS

- Shelly Davis-King will reach out to Matt Harper once she has additional information about historic and potentially ongoing Native American use of a trail near Lake Sabrina.

16.0 PROJECT BOUNDARY AND LANDS (LAND 1)

16.1 MODIFICATION OR VARIANCES FROM THE APPROVED PLAN

There were no modifications or variances to the approved methods of this study plan.

16.2 QUESTIONS AND COMMENTS

Matthew Harper, Kleinschmidt, presented on the Project Boundary and Lands Study. There were no questions.

16.3 ACTION ITEMS

- There were no action items in this section.

17.0 WILDLIFE RESOURCES STUDY (TERR 4)

17.1 MODIFICATION OR VARIANCES FROM THE APPROVED PLAN

General wildlife surveys were reduced to one field survey in 2019 and are now complete. In June 2020, two new cameras were placed at wildlife crossing areas to replace those stolen in 2019. As discussed below, Protocol Goshawk Surveys were not able to be implemented as a stand-alone study because of snowpack; rather these were aligned with scheduled terrestrial surveys after consultation with the US Forest Service. SCE considers this to be a study plan variance.

17.2 QUESTIONS AND COMMENTS

Brad Blood and Steve Norton, Psomas, presented Wildlife Resource Study. Questions and comments from participants included:

- Q (FERC): You stated that the timing of the amphibian survey may have resulted in a lack of observations. Will you be conducting additional surveys during a more appropriate timeframe?
    - R(Psomas): We do not have plans to do any additional amphibian surveys. There are no real records for Special Status amphibians in the project area, but we wanted to confirm that they were not there. We did see a few tree frogs, though [**NOTE**: See Attachment 4 for additional information].
- Q (FERC): Why was the species-specific northern goshawk survey not conducted? In determining presence based on the general wildlife study, did the general wildlife survey follow the USDA protocols that you proposed in the RSP for the northern goshawk surveys? If not, how can you determine that more intensive habitat surveys, like the ones you proposed in the RSP, are not required?
    - R (Psomas): In 2019, we could not conduct the survey because of the timing of approvals. However, we did observe goshawks on Birch Creek and, therefore, confirmed that they are in the project area and are breeding there.
    - Q (FERC): How can you determine that northern goshawks are nesting on the basis of limited juvenile sightings/calls and inactive nests?
        - R (Kleinschmidt): We have CNDDB records and found three active nests along Birch Creek.
    - Q (FERC): There was a preliminary season in the revised study plan in which fieldwork was proposed. Why was the goshawk survey not included in the preliminary season? The northern goshawk survey was required under the Study Plan Determination.
        - R (Psomas): Goshawk surveys must be conducted very early in the season. We were not able to get everything approved that early and hoped that observing goshawks in the area would satisfy the intent of the survey.
        - C (Kleinschmidt): The Team appreciates FERC's concern around this study. The Team had ongoing conversations with USFS and documented its plans with respect to the goshawk surveying in our progress reports. Would it help address that concern to provide the details of that consultation as part of the meeting summary? **[ACTION ITEM; See Attachment 5]**
        - C (FERC): Yes, it would.
- C (FERC): It is a bit premature, but since it was raised in the ISR: when you file your PLP and FLA, please include SCE's Avian Protection Plan. Any Privileged/ CEII portions may be filed as such, but the Plan will help FERC staff as part of our environmental review.

    - R (Kleinschmidt): Yes, we will include SCE's Avian Protection Plan as part of the final report. **[ACTION ITEM]**
- Q (Water Board): Can you estimate the size of the mule deer population in the study area?
    - R (Psomas): I cannot speak to the size of the population but can coordinate with CDFW to get an answer. We saw numerous deer in the camera footage but could not generate a population estimate from that.
    - C (CDFW) We consulted with Inyo County early in the relicensing process about the mule deer population, and they indicated it was a fairly small group of non-migratory resident deer. They did not believe it was part of a larger migration route. The County biologist could likely provide more information.
        - C (Water Board): I will reach out directly to Inyo National Forest/Inyo County to request information on the size of the mule deer population. **[ACTION ITEM]**
- Q (Water Board): Have beavers been observed, and if so, is there an estimated population size?
    - R (Psomas): No, we have not seen any beavers so far. I have seen them in the past in the pond at Intake 2; they have also been seen near Plant 5. I will confirm and share this information once I have gathered it. **[ACTION ITEM]**
- Q (Water Board): Were you able to determine what species of bats are utilizing powerhouses and transformer sheds for roosting?
    - R (Psomas): We could not identify the bat species using powerhouses and transformer sheds. They are likely big brown bats, but because we did acoustic surveys, we cannot determine the species.
- Q (Water Board): Were there any Special Status bats?
    - R (Psomas): We did not see Townsend's big-eared and spotted bats, which are the Special Status species. We did see western small-footed myotis (Myotis ciliolabrum), and Yuma myotis (Myotis yumanensis) which are the Special Status BLM sensitive species. The rest are mostly common. The rest of the observations are mostly common.
- Q (USFS): Did wildlife crossings with guzzlers have water during the study period, and will water be kept in the guzzlers moving forward?
    - R (Kleinschmidt): When we started the relicensing, the guzzlers did not have water, but we requested that water be added, and SCE has kept them operational ever since.
    - C (SCE): SCE plans to continue maintaining guzzlers.
- Q (USFS): Did the Team take any photos of drinking wildlife?
    - R (Kleinschmidt): Yes, we have included a lot of photos and will include more photos in the final report.
    - C (USFS): It would be nice to know what species are coming for water.
    - R (Kleinschmidt): We can circulate a list of species identified as using guzzlers. **[ACTION ITEM]**
- Q (USFS) How much of the area around the project is open to hunting?
    - C (SCE): Based on the map, the entire project area is zoned for deer hunting.

17.3 ACTION ITEMS

- The Relicensing Team to provide SCE's Avian Protection Plan as part of the PLP and FLA.
- The Relicensing Team will provide Kary Schlick (USFS) with a list of species using the guzzlers and append the list to the meeting summary.
- The Relicensing Team will provide a consultation record of conversations with the Forest Service regarding the timing and the elimination of the Species-specific Northern Goshawk Survey; provide as an appendix to the meeting summary.

- Brad Blood will investigate the estimated size of the beaver population and share it with Ed Hancock (Water Board).

ATTACHMENT 1 – ISR PRESENTATION SLIDES

SOUTHERN CALIFORNIA EDISON®
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Bishop Creek Project (P-1394) Relicensing

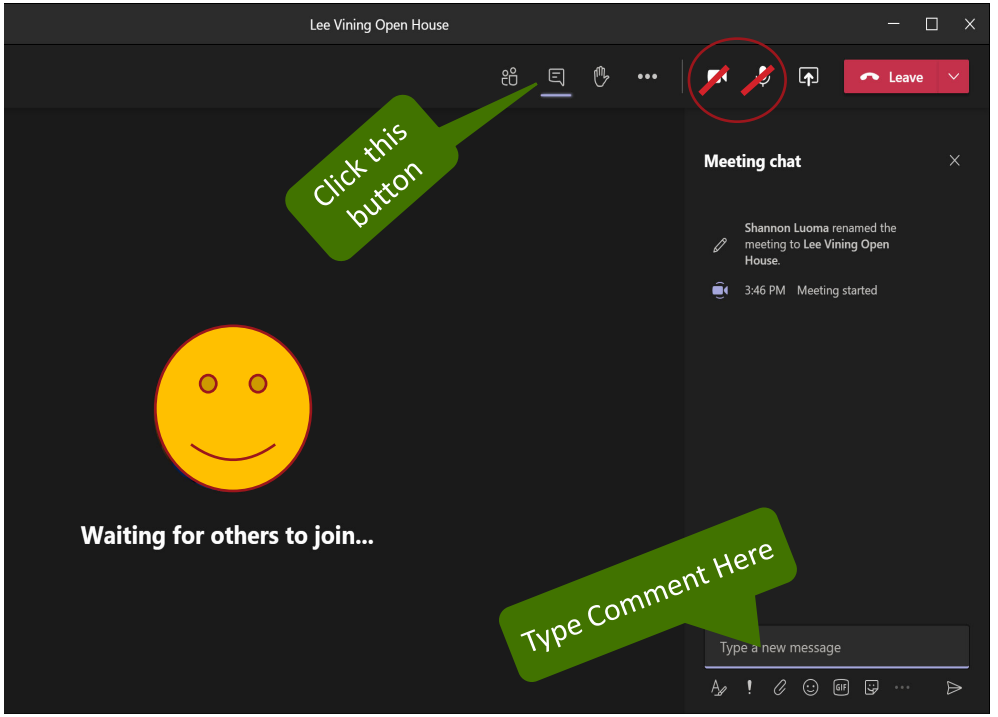
Initial Study Report Meeting

November 10, 2020

The meeting will begin at **9:05am**. We appreciate your patience and muting your microphone while we wait.

How to Ask a Question

- Please use the Chat Box
- Use the "Raise Hand" Feature to Indicate You Would Like to Ask Your Question Verbally
- Please Wait to be Called on and then Unmute Your Line
  - Introduce yourself (name and affiliation) prior to speaking



- Please Listen and Respect Each Other
- Please Stay on Topic

ISR Meeting Objectives

- Update public stakeholders on the relicensing process and accept any feedback
- Provide an opportunity for stakeholder/TWG questions about the study results described in the Initial Study Report
- Confirm process for requesting new studies or modifications to existing studies

Bishop Relicensing ISR Team

SCE Team

Matthew Woodhall
Project Manager

Martin Ostendorf
Senior Manager

Audry Williams
Senior Archeologist, Cultural/Tribal Study Lead

Al Partridge
Generation Supervisor

Seth Carr
Operations Manager

Vince White
Hydrographer

Consultant Team

Finlay Anderson
Project Manager

Shannon Luoma
Deputy PM

Kelly Larimer
Project Director

Michael Donovan
Water Quality

Ken Jarrett
Fisheries Study Lead

Edith Read
Botanical Study Lead

Bret Hoffman
Operations Study Lead

Tyler Kreider
Sediment and Geomorphology Study Lead

Matt Harper
Recreation/ Land Use Study Lead

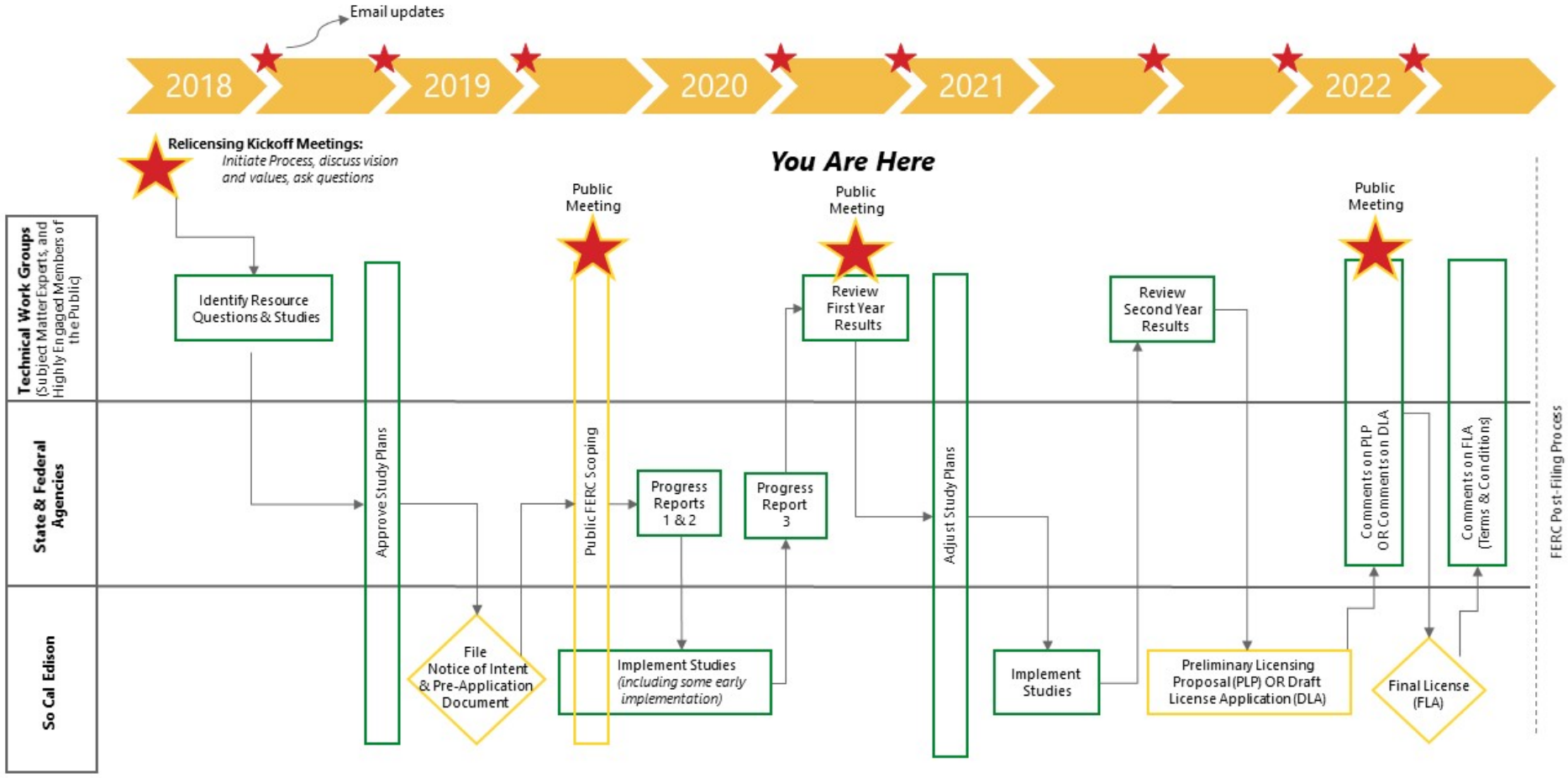
Brandon Kulik
IFIM Study Lead

Brad Blood
Wildlife Study Lead

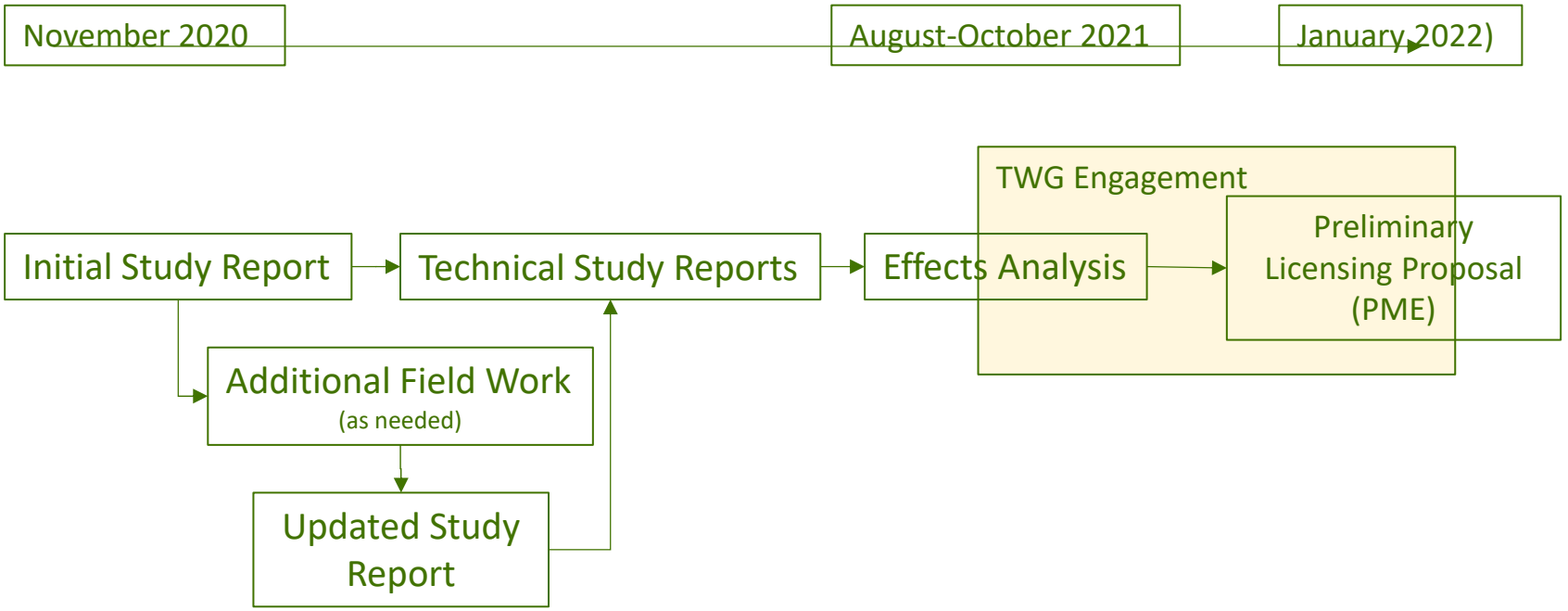
Lynn Compas
Cultural Study Lead

Shelly Davis-King
Tribal Study Lead

FERC Project Schedule



FERC Project Schedule



FERC Criteria for Expanding or Adding Studies

- Criteria for modification of approved study – requestor should demonstrate:
  - Approved studies were not conducted as provided for in the approved study plan; or
  - The study was conducted under anomalous environmental conditions or that environmental conditions have changed in a material way.

FERC Criteria for Expanding or Adding Studies

- Criteria for new study – requestor should explain:
  - Any material changes in the law or regulations applicable to the information request;
  - Why the goals and objectives of any approved study could not be met with the approved study methodology;
  - Why the request was not made earlier;
  - Significant changes in the project proposal or that significant new information material to the study objectives has become available; and
  - Why the new study request satisfies the study criteria in §5.9(b).

FERC-Driven Schedule and Next Steps

- Meeting Summary no later than 15 days after meeting
  - To include modifications or new studies proposed by applicant
- Comments on meeting summary within 30 days
  - SCE will endeavor to file meeting summary early to avoid any conflicts with holidays.
- Dispute resolution pathway if necessary

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Questions?

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Resource Areas

Water Quality – AQ 5

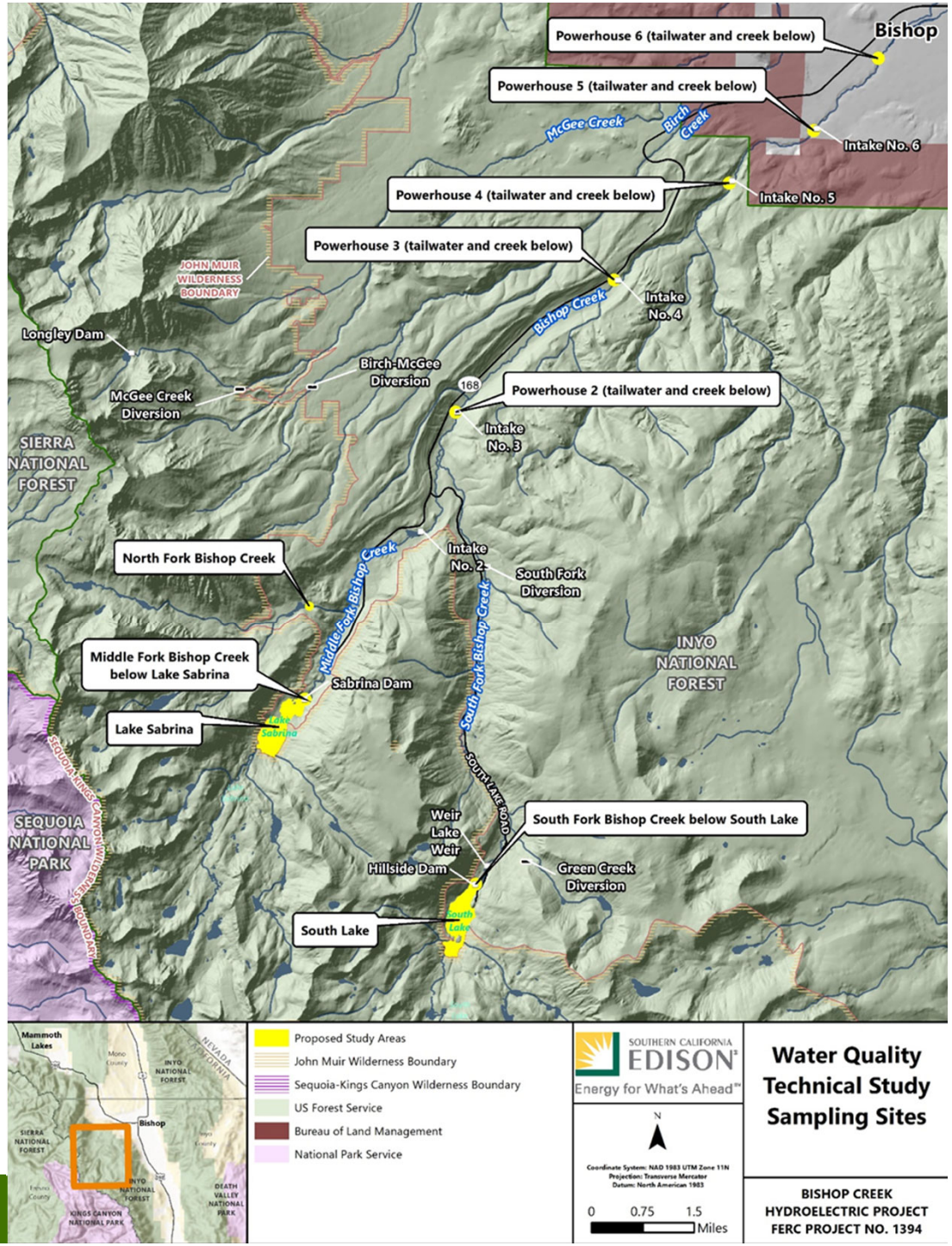
Water Quality Study Plan Review – AQ 5 Goals and Objectives

- Monitor WQ (Turb., Cond., TDS, PO_4^{-3}, NO_3, N-tot) on a regular basis at multiple sites:
  - Bishop Creek, South Lake, Lake Sabrina
- Monitor water temperature & DO for 2 years at:
  - Bishop Creek, South Lake, Lake Sabrina
- Monitor E. coli at recreation areas in July-Aug.
  - Intake No. 2 reservoir, South Lake, Lake Sabrina
- Ensure future Project facilities & operations are:
  - Consistent with WQ goals and objectives for Bishop Creek in the Basin Plan
  - Consistent with desired conditions in the 2018 Inyo National Forest Management Plan

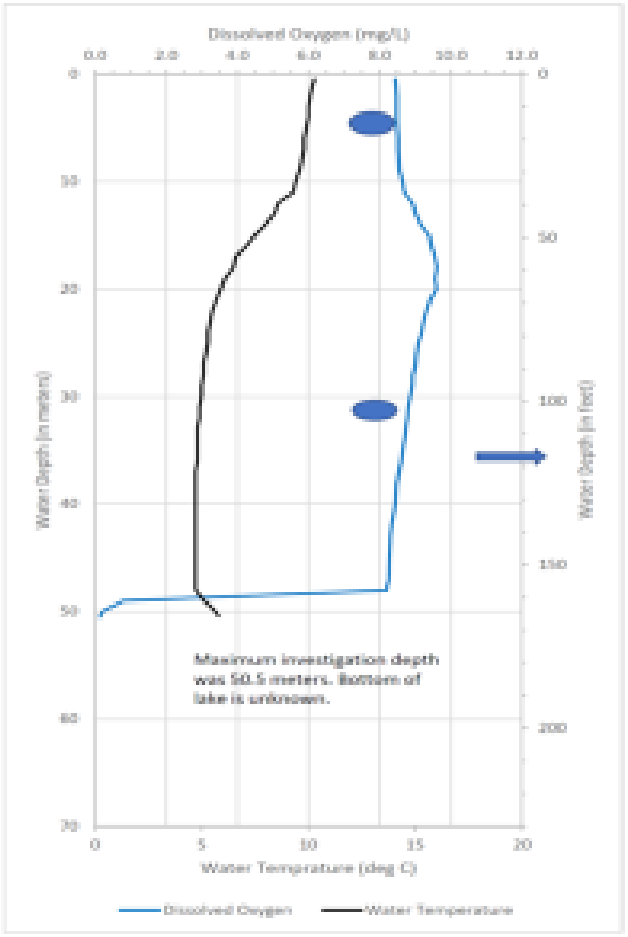
Water Quality Study Plan Status

Study Name	Status	Modifications and/or Consultation Needed
AQ 5 – Water Quality	Water quality sampling is being conducted at Lake Sabrina, South Lake, Intake No. 2 reservoir and locations along Bishop Creek throughout the summer of 2020 as outlined in the revised Water Quality Implementation Plan submitted to FERC in April 2020 with Progress Report 3.	SNARL was not available; after consultation with Water Boards opted to used Weck Laboratories

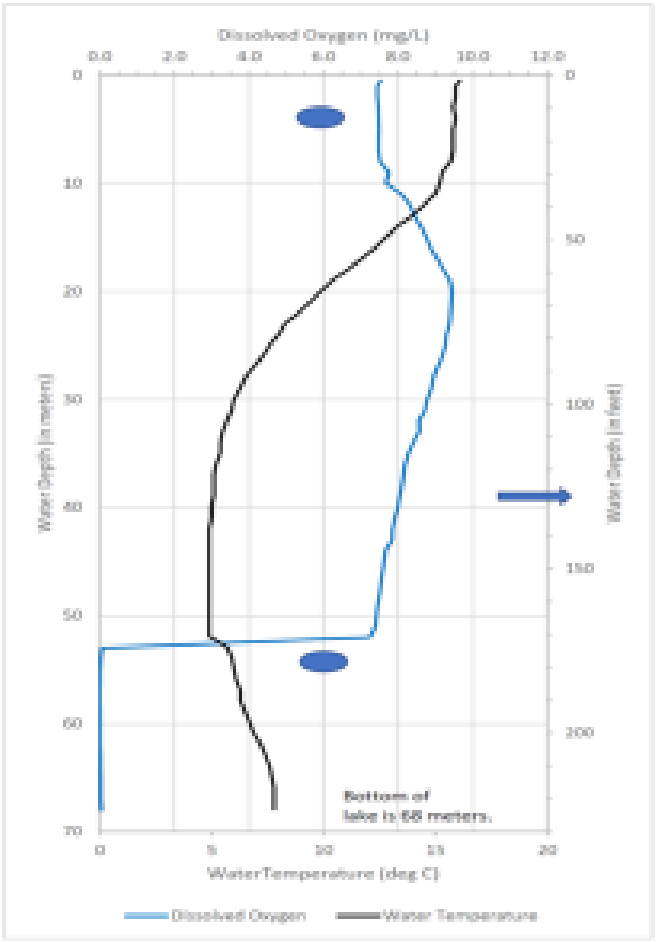
Water Quality Study Plan – AQ 5 Sampling Sites



South Lake – June & July

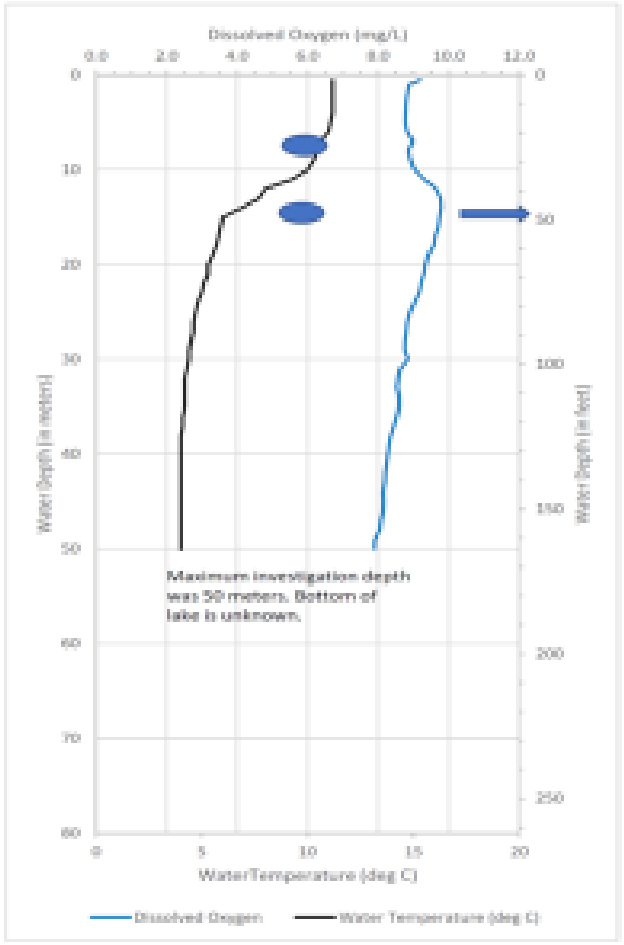


- Water sample collected at this approximate depth.
- Approximate depth of lake outlet.



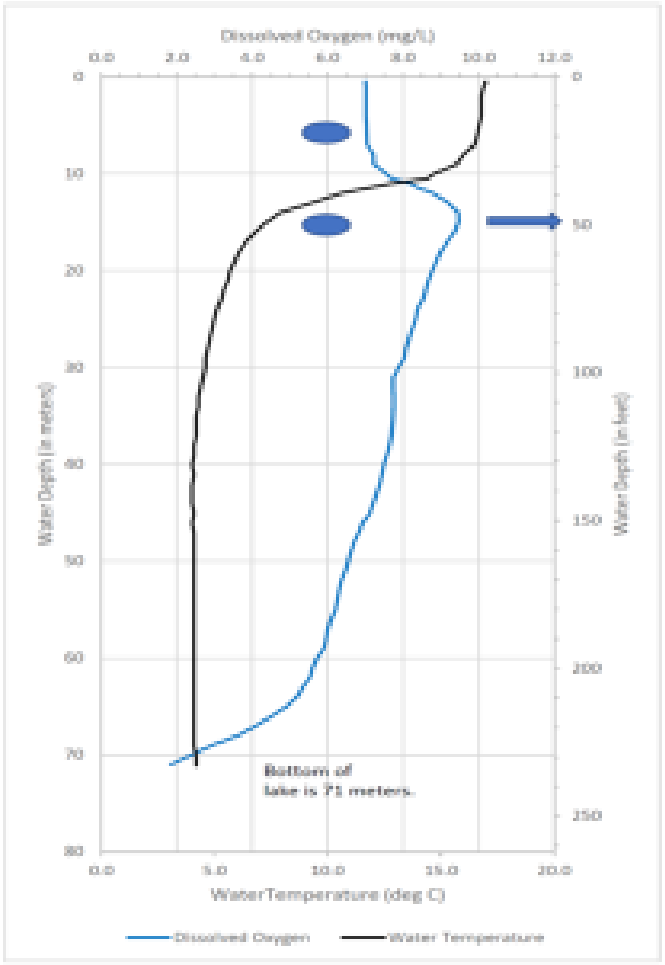
- Water sample collected at this approximate depth.
- Approximate depth of lake outlet.

Lake Sabrina – June & July



- Water sample collected at this approximate depth.

- Approximate depth of lake outlet.



- Water sample collected at this approximate depth.

- Approximate depth of lake outlet.

Water Quality Study Plan Review – AQ 5 Data Summary

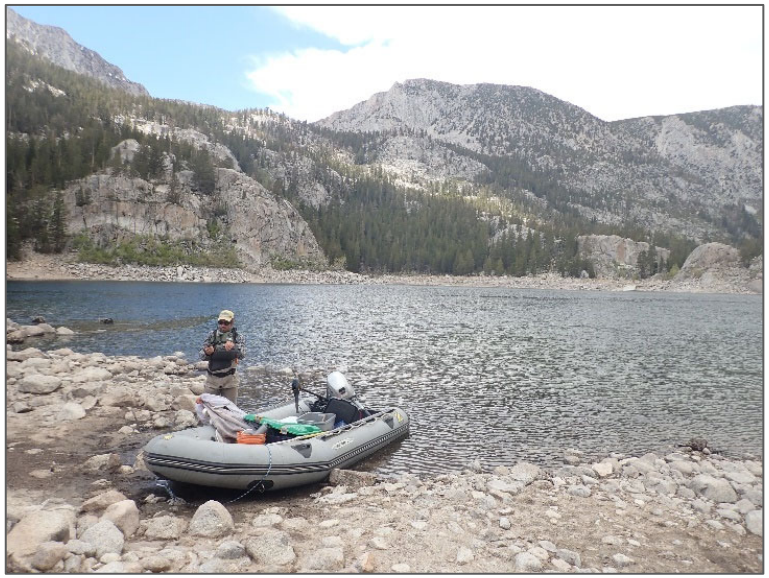
- Lakes
  - DO values ranged from 7.5-9.5 mg/L above outlet level (36-39 meters) and dropped to <1 mg/L near the bottom (~50 meters) of South Lake
  - DO values ranged from 7.0-9.5 mg/L above outlet level (~15 meters) and dropped to <2 mg/L near the very bottom of Lake Sabrina (~70 meters)
  - TDS values were generally low (<30 mg/L) with the exception of a very deep sample (>50 meters) in SL
  - NO_3 was ND in all samples; N-Tot and PO_4 were mostly ND except for a few deep samples in both lakes
  - E. coli values were mostly ND<1.0 MPN/100 ml for Lake Sabrina and South Lake
  - Intake No. 2 reservoir had E. coli detections in 6 of 7 samples but values were very low (<25 MPN/100 ml)

Water Quality Study Plan Review – AQ 5

- Data Summary (continued)
  - Bishop Creek
    - DO ranged between 7-9 mg/L and water temperature between 7-18 °C
    - TDS ranged from 12-38 mg/L with the highest concentration below Powerhouse No. 6
    - NO_3 was ND; N-Tot was detected in only 2 samples (0.41 & 1.1 mg/L)
    - PO_4 ranged from ND-0.044 mg/L. Highest concentration was in North Fork of Bishop Creek
  - Powerhouse Tailwater
    - Temperature (11-15 °C) and DO (8-9 mg/L) were similar to Bishop Creek water
- Outstanding tasks
  - Next progress report to include all data collected in 2020
  - Repeat WQ program in Summer-Fall of 2021

Fish Distribution Baseline Study (Reservoirs) – AQ 4

Bishop Creek Reservoir Fish Distribution – AQ 4 Goals and Objectives



- Characterize reservoir fish populations
  - Assemblage: South Lake, Lake Sabrina, and Longley Lake
  - Owens sucker presence / absence: Lake Sabrina and South Lake
- Evaluate select localized water quality parameters that may affect the growth and distribution of fish species
- Evaluate Project facilities and operations are not inconsistent with the Desired Conditions described in the Land Management Plan for the INF (USDA 2018)

Reservoir Fish Distribution – AQ 4 Status

Study Name	Status	Modifications and/or Consultation Needed
AQ 4 –Baseline Fish Distribution Study (Reservoirs)	Owens sucker and fish assemblage surveys completed in Lake Sabrina and South Lake in June and September 2020. Gill netting at Longley Reservoir completed in September 2020. South Lake and Lake Sabrina reservoir bathymetry surveys were completed July–August 2020 to allow assessment of fish habitat in the reservoirs.	Owens sucker sampling period was reduced after a sufficient number of suckers was captured to confirm presence (n=105) and spawning behavior/redds were observed (Lake Sabrina). Gill net set times at Longley Lake decreased *slightly;* still included times of day when trout species are most active (evening, night, and dawn hours).

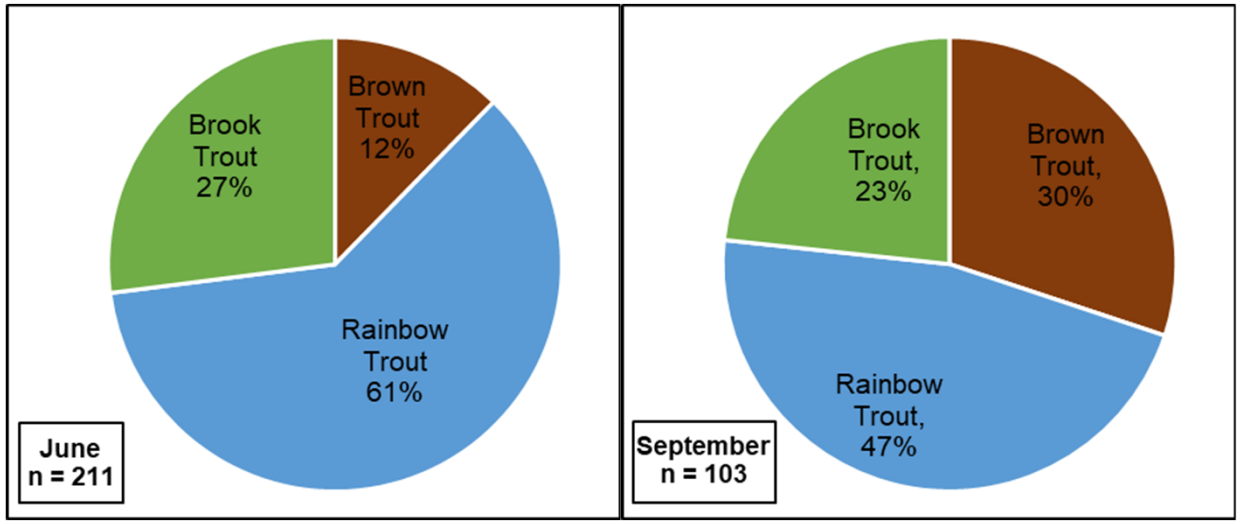
Reservoir Fish Distribution – AQ 4

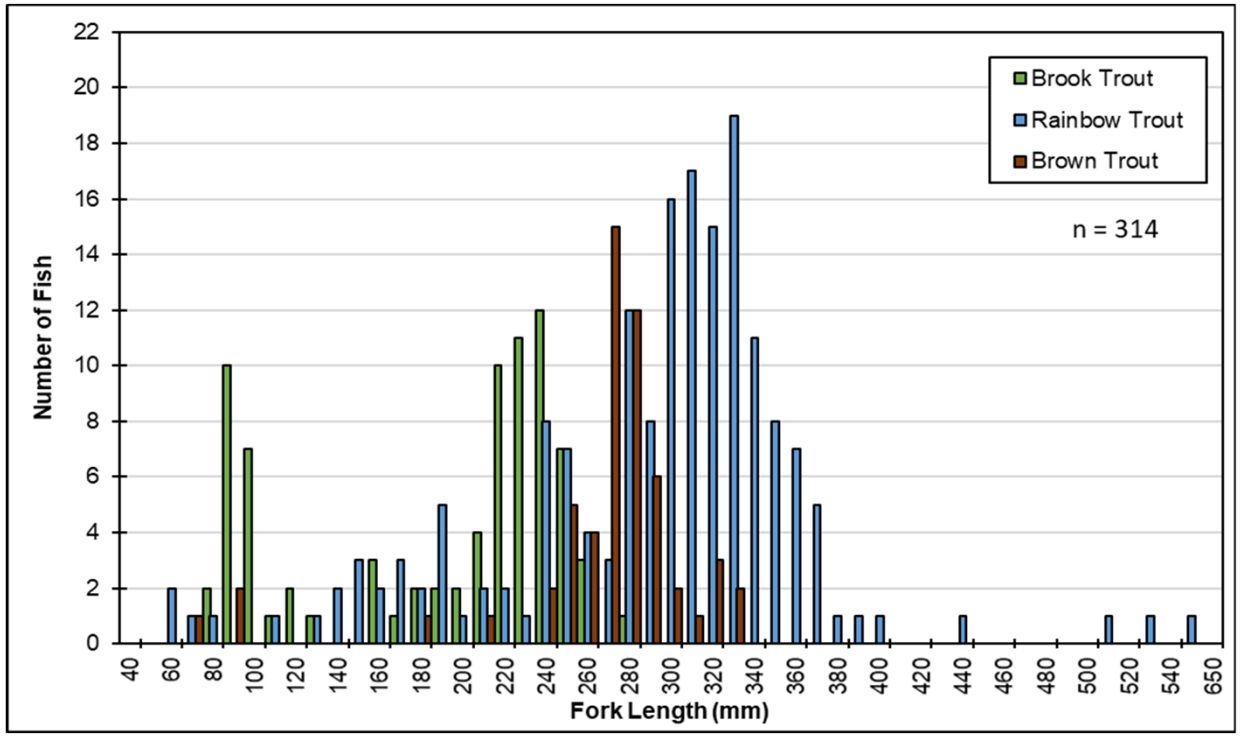
Methods

- Weekly daytime electrofishing
  - Targeted Owens sucker electrofishing in Lake Sabrina and South Lake during the spawning season (June)
- Night-time boat electrofishing
  - Fish Assemblage surveys in Lake Sabrina and South Lake (June and September)
- Gill netting
  - Fish Assemblage in Longley Lake (September)
- Bathymetry Surveys
  - Lake Sabrina and South Lake (August)

South Lake

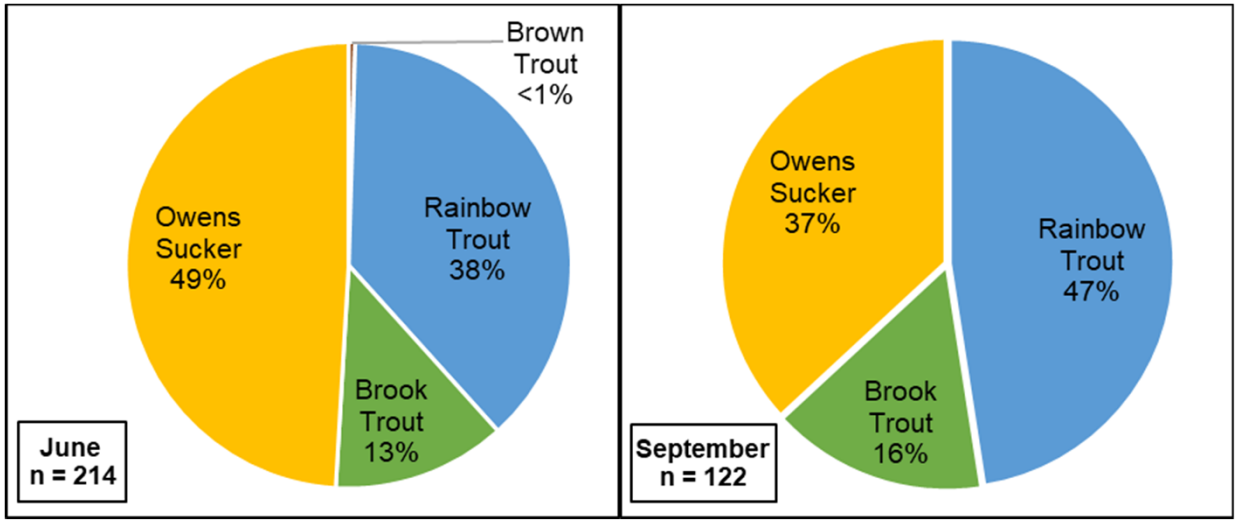
- Coldwater trout fishery
- Predominately hatchery rainbow trout
- Some natural recruitment likely based on smaller size classes present

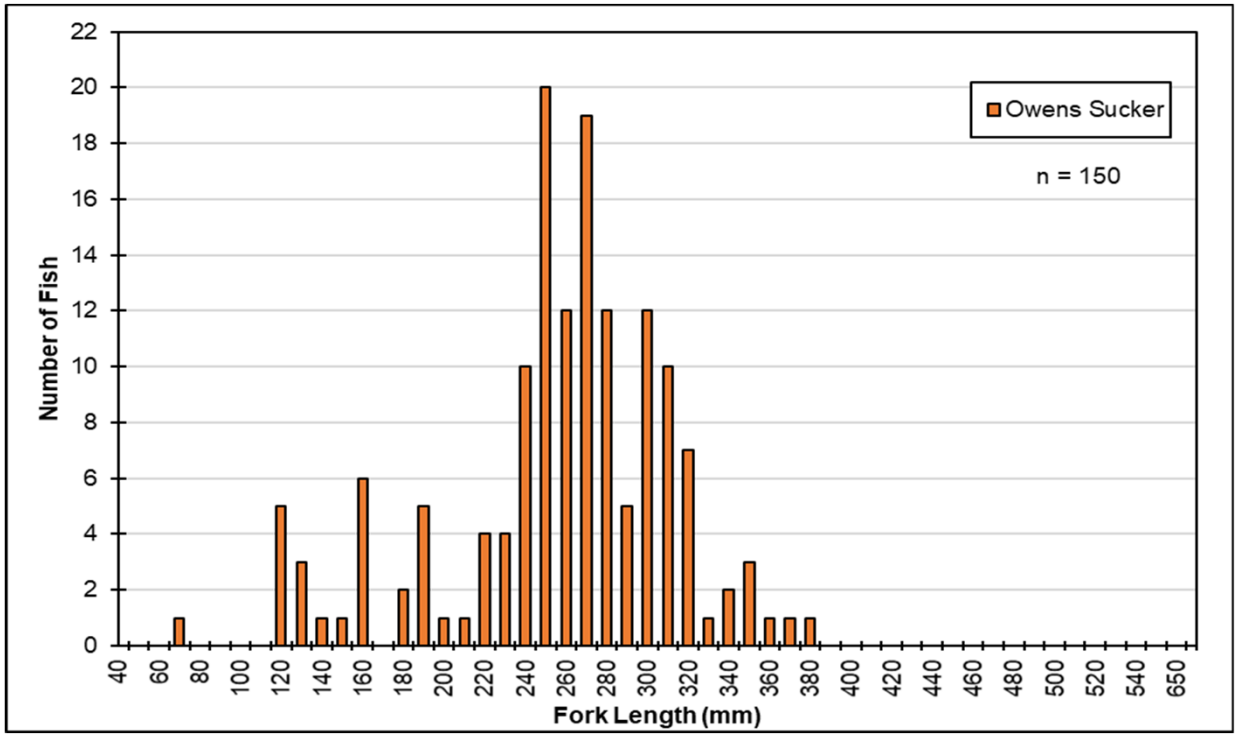




Lake Sabrina

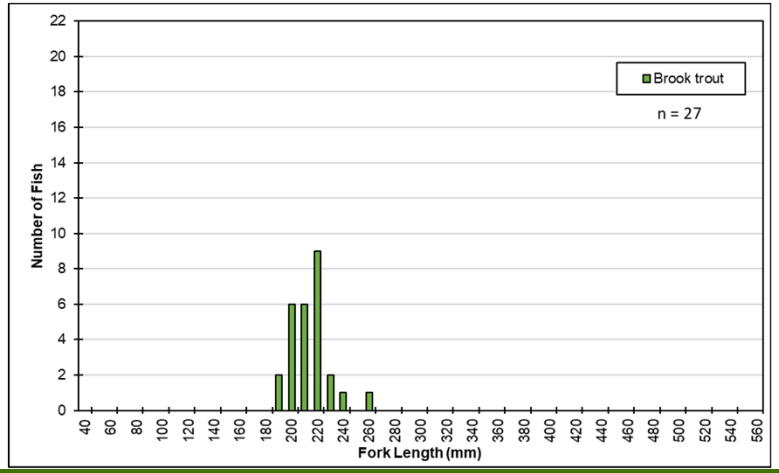
- Coldwater trout and Owens sucker
- Owens sucker most abundant
- Trout population predominately hatchery rainbow trout
- Some natural recruitment of trout and sucker (based on smaller size classes present)





Longley Lake

- Gill netting
- Only brook trout observed



Reservoir Fish Distribution – AQ 4

- Field surveys complete, no changes or additional studies anticipated.
- Trout scales and sucker operculum samples ready for CDFW analysis per Study Plan
- Following the ISR meeting, authors intend to work on final technical report, including bathymetric survey data, provided no additional surveys are needed.
- Conclusions will be summarized in an updated Reservoir Fish Technical Report in 2021 and included in the Updated Study Report in November 2021.

BREAK

Riparian Community Analysis – TERR 1

Riparian Community Analysis – TERR 1 Goals and Objectives

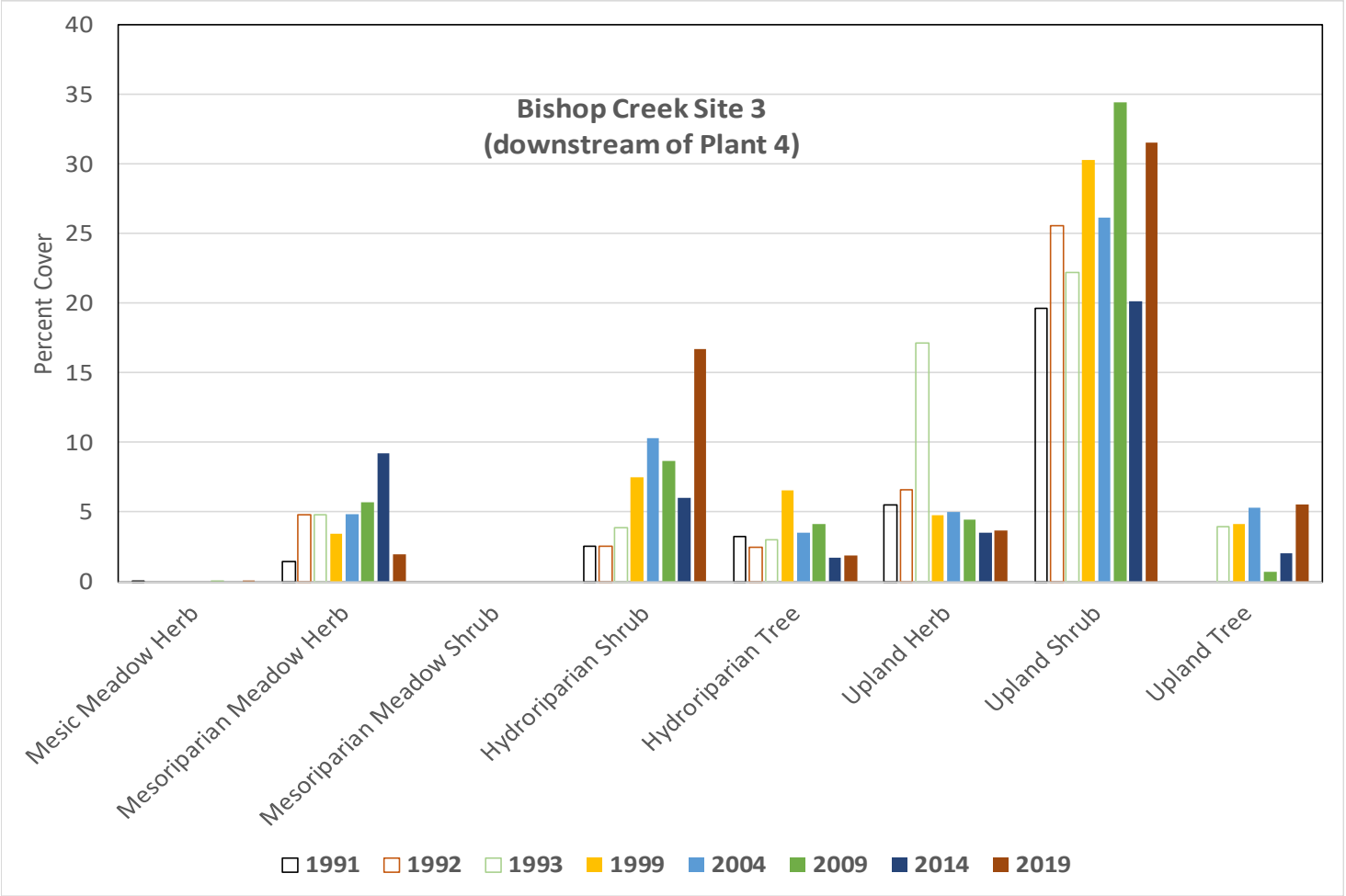
- Re-analyze the long-term monitoring dataset generated from monitoring conducted in compliance with the existing license using the guild approach of Lytle et al. (2017);
- Review and assess black cottonwood abundance and determine whether the decline observed in 2014 continued through 2019.

Riparian Community Analysis – TERR 1

Study Name	Status	Modifications and/or Consultation Needed
TERR 1 – Assessment of Bishop Creek Riparian Community	SCE conducted riparian vegetation surveys from 1991 through 2019 focusing on the regulated stream reaches below Project diversions and reservoirs. These data were used for the guild analysis part of the study and for analysis of black cottonwood abundance trends over time.	No changes or modifications to methods and no additional field work is anticipated for the duration of this relicensing process. Following the ISR meeting, authors will work to finalize technical reports provided no additional survey work is needed.

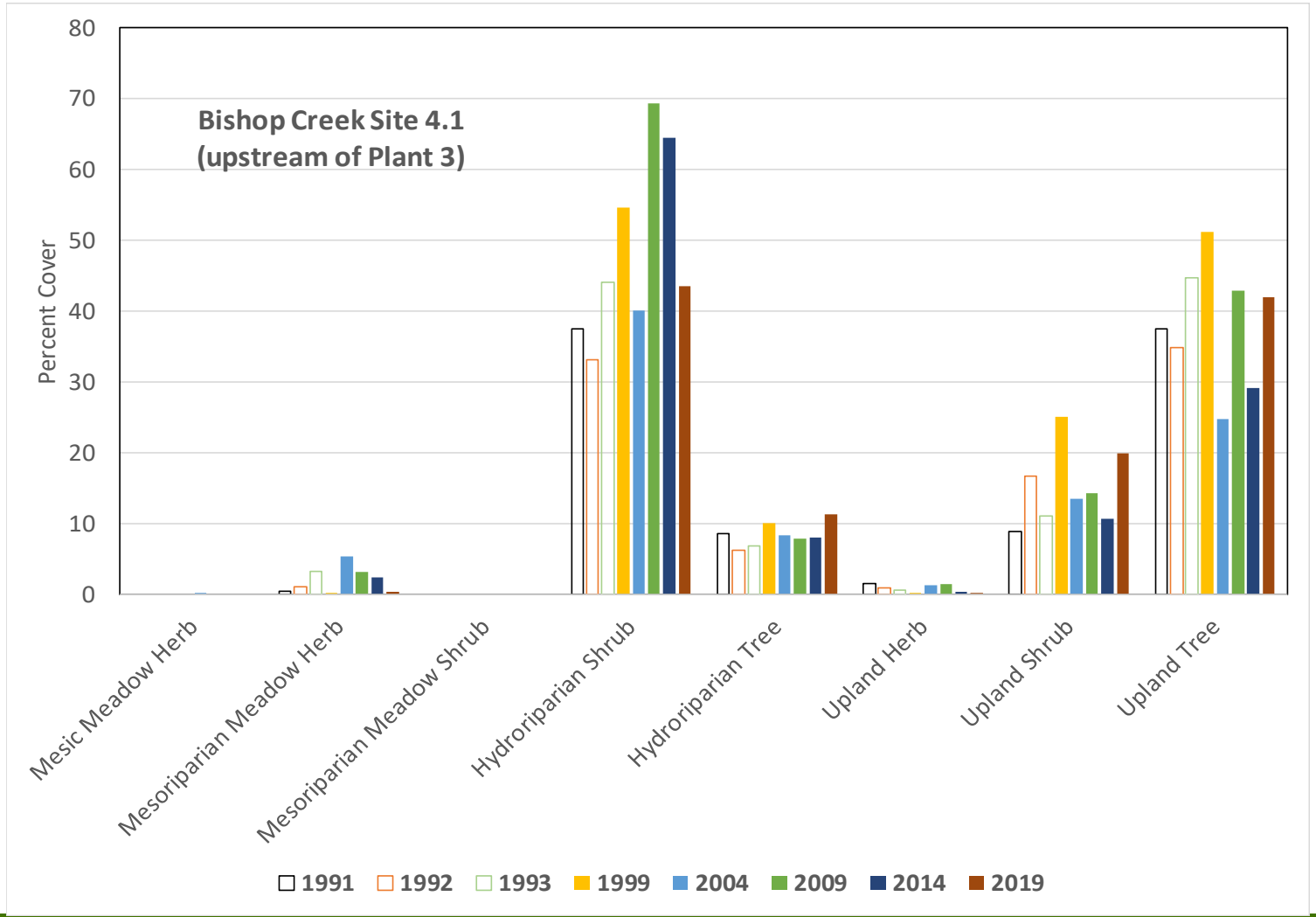
Riparian Community Analysis – TERR 1

Guild Analysis – example of results: normally ephemeral flow before minimum instream flow releases began in 1994



Riparian Community Analysis – TERR 1

Guild Analysis – example of results continued: perennial flow before minimum instream flow releases began in 1994



Riparian Community Analysis – TERR 1

- Black cottonwood (*Populus trichocarpa*) abundance over time. Abundance measured as percent cover in permanent belt transects.

Hydrologic regimes:

- Site 5: normally ephemeral flow before minimum instream flows began in 1994. Abundance trended upward in 2019.
- Sites 4.1 and 4.2: perennial flow. Two adjacent sites trended in opposite directions in 2019.

	1991	1992	1993	1999	2004	2009	2014	2019
Site 4.1	7.5	6.0	5.7	9.1	8.2	7.7	5.8	11.2
Site 4.2	12.6	11.9	13.2	15.2	12.3	10.7	7.3	2.2
Site 5	0.3			1.2	1.3	1.7	0.5	1.4

Riparian Community Analysis – TERR 1

Planning and Schedule and necessary modifications

Study completed. No additional studies or analyses planned for relicensing purposes. Next monitoring season in 2024 under the existing license will again evaluate black cottonwood abundance.

Fish Distribution Baseline Study (Creeks) – AQ 3

Bishop Creek Fish Distribution Study – AQ 3 Goals and Objectives

- Portray the current distribution of all fish species and the growth and density of wild brown trout populations in the Project Area.
  - identify the extent to which naturally reproducing brown trout populations are consistent with historic levels
  - Evaluate population, health, and condition of recreationally important trout species (e.g., brown trout, rainbow trout, and brook trout in lotic habitat affected by Project operations.
  - Assess whether recruitment of Owens sucker has occurred in Bishop Creek downstream of Lake Sabrina and South Lake
  - Assess the distribution of other fish species in Project waters
- Determine whether Project facilities and operations are consistent with the Desired Conditions described in the Land Management Plan for the Inyo National Forest (USDA 2018).

Bishop Creek Fish Distribution Study Status

Study Name	Status	Modifications and/or Consultation Needed
AQ 3 – Fish Distribution Baseline Study (Creeks)	Electrofishing and gill netting was conducted in project streams was completed in 2019.	No changes or modifications to methods and no additional field work is anticipated for the duration of this relicensing process.

Bishop Creek Fish Distribution Study – AQ 3 Planning and Schedule

- This study was completed in 2019 and a technical memo was submitted to the TWG in Spring 2020 with progress report 2.
- No additional surveys are planned for the remainder of the relicensing.
- Data is being analyzed and will be included in the final technical report, anticipated for Spring/Summer 2021.

Operations Model – AQ 2

Bishop Creek Operations Model – AQ2 Goals

- Develop a robust Operations Model (Model) to assist SCE and stakeholders in understanding how Project operations interact with Bishop Creek hydrology.
- Determine effective operating limits for all units to accurately represent installed and dependable capacity for licensing documents.

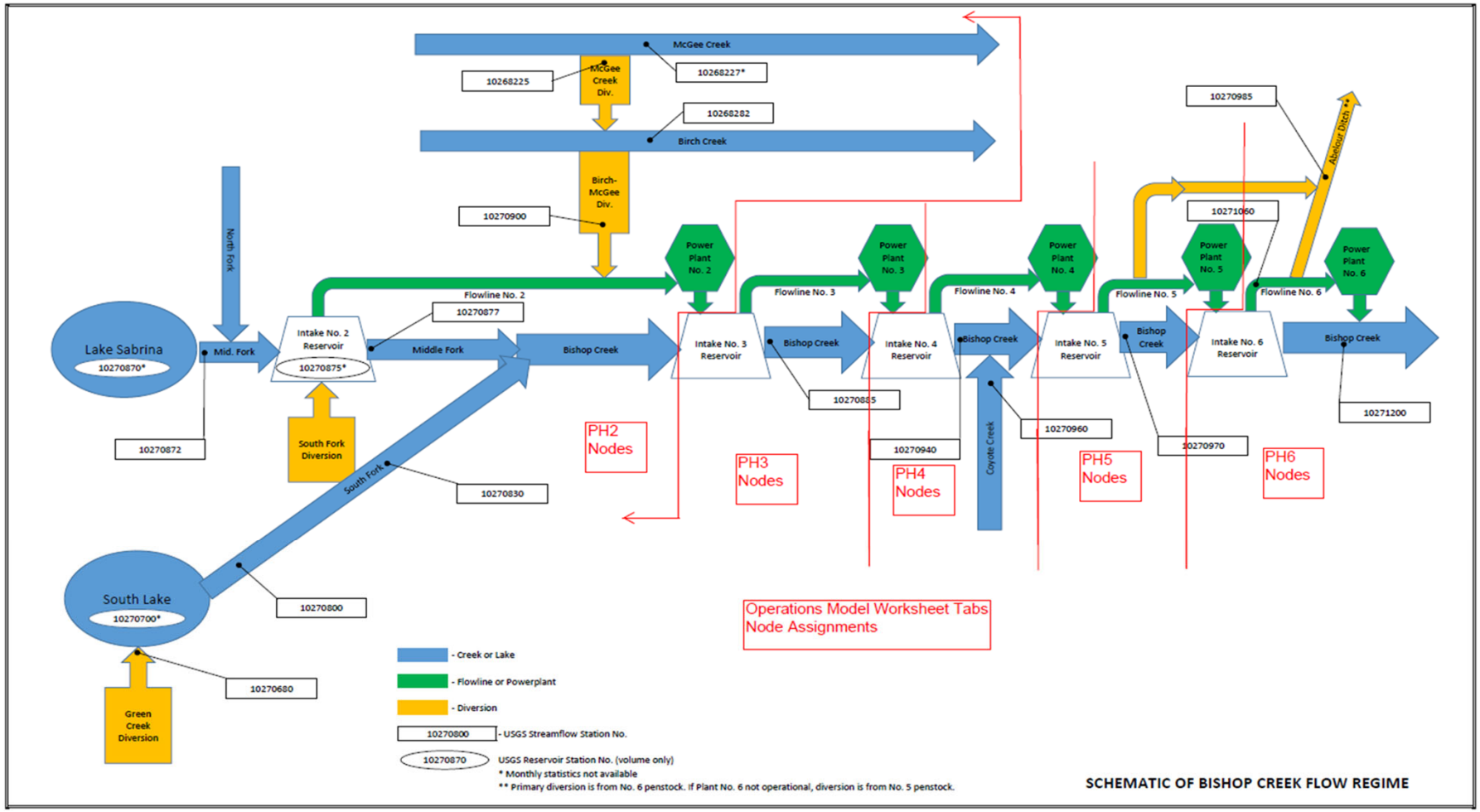
Bishop Creek Operations Model – AQ2 Objectives

- Calculation of System Inflows
  - Based upon hydrologic data, not subject to changing allocation rules
    - Calculated increase of storage plus flow release from reservoirs
    - Ungauged areas synthesized based on gauged areas
    - Changes in flow release requirements do not affect inflow calculations, only allocations; model rules set according to current requirements
    - Mass balance for calibration: net calculated inflow vs. outflow gauged
- Align model with needs of other relicensing studies and information needs.
- Develop procedures to configure model for alternative operational scenarios and document results.

Operations Model – AQ 2

Study Name	Status	Modifications and/or Consultation Needed
AQ 2 – Operations Model	The Operations Model has been configured and populated with historical data. The Relicensing Team continues to calibrate the model with SCE Operations.	No changes or modifications to methods.

Operations Model – Structure and Nodes



Operations Model

- Status of Model During May TWG Meeting
  - Reviewed operational and generation "nodes" (structure)
  - Reviewed hydrology basis
    - Wet, Mean, Dry Years based on snow course measurements
    - Historic Hydrograph
      - Gaged and synthesized inputs
    - Request for hydrology refinement made
  - Reviewed constraints, criteria
    - Physical limitations
      - Hydraulic capacity
      - Reservoir storage
    - Chandler Decree
    - Minimum Flows

Operations Model Updates

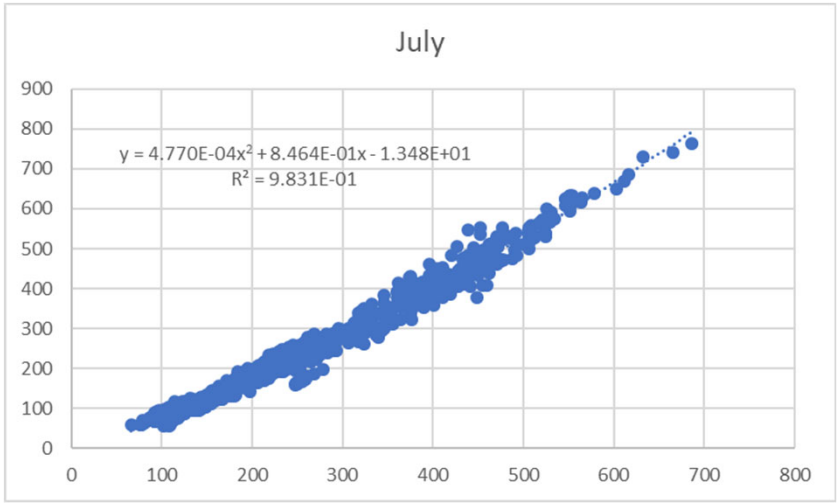
- Hydrologic Input Changes
  - Incorporated 2018, 2019 Water Data
    - Gage Flow & Storage Data, Snow Course Measurements, Synthesized Inflows
    - Through end of September
    - Model calculations, results also extended
  - Identify and Examine Potential Sources of Error
    - Verified accuracy of outflow gages
      - Calibrated across entire flow range over multiple decades
      - Eliminated as source of significant variable discrepancies
    - More accurate storage data incorporated (significant digits)
      - Reduced model-predicted negative inflow days by more than half

Hydrology Refinement

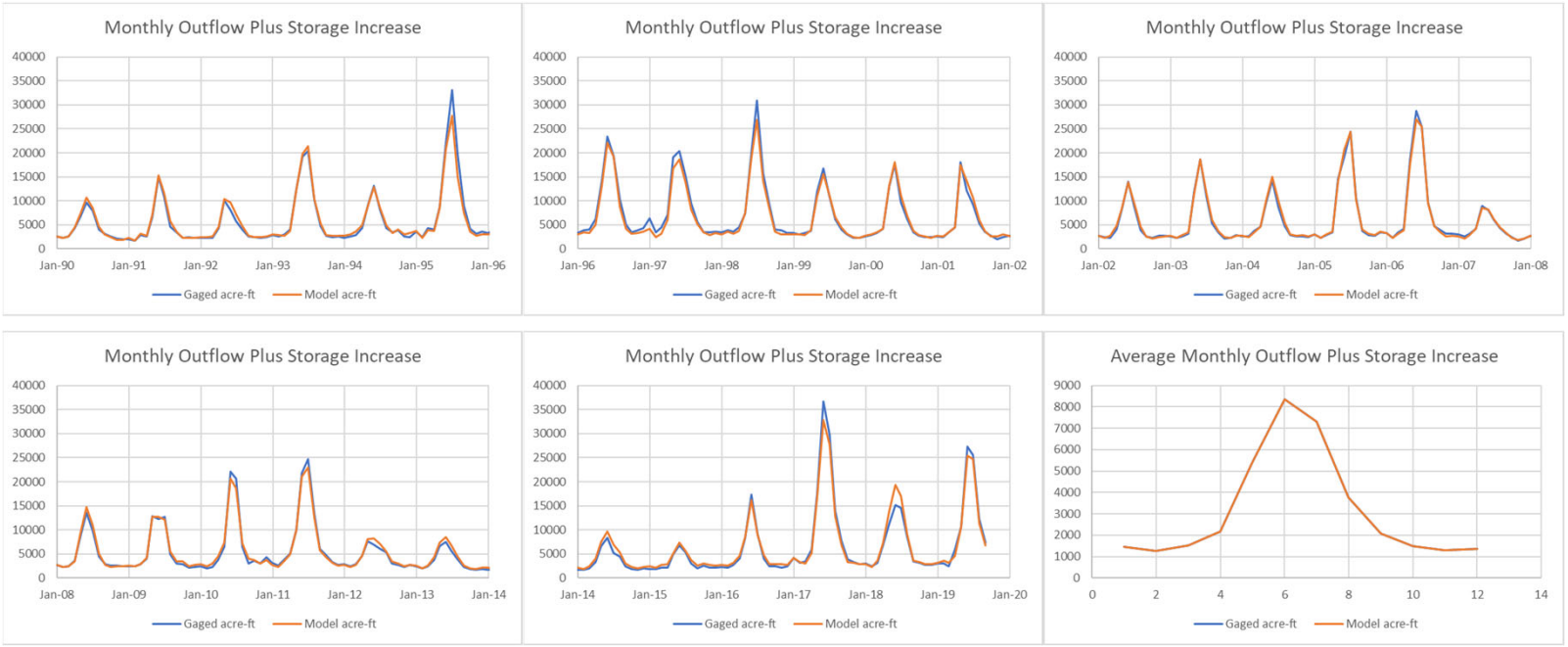
- Daily Release Plus Storage Increase = Net Inflow
  - Comparison of model net inflow vs. gage records
    - Sabrina, S. Lake 24-hour storage change
    - Releases at Plant 6 plus Abelour ditch
    - Sum = net inflow
  - Independent of project operation
    - Historic (gage) release of 100 cfs plus storage increase 50 cfs = 150 cfs net inflow
    - Model release 75 cfs plus storage increase 70 cfs = 145 cfs net inflow
    - This would be calibration within 5 percent for that example, model underpredicting net inflow

Inflow Calculations

- Mass balance for calibration: net calculated inflow vs. gaged
  - Y = model, X = gaged
  - Apply equation to inflow at each contributing location in model
  - 5-day moving average comparison due to travel duration, attenuation



Monthly Comparisons



Operations Model – Workplan

- Integrate Hydrology, Constraints and Nodes ✓
- Model ability to allocate water resources ✓
  - Wet, normal, dry years (based on snowpack)
    - Highest, middle, lowest thirds
  - Storage planning
- Develop approach for TWG requests of model runs (winter/spring 2021)
  - Template for inputs and desired outputs
  - Compliance goals
    - To come from studies (iterative approach)
  - Operational needs

Sediment and Geomorphology – AQ 6

Sediment and Geomorphology – AQ 6 Goals and Objectives

- Determine flow conditions in which sediment is mobilized in the stream channel
- Understand if and how LWM is mobilized
- Evaluate flows that could mobilize sediments and LWM from forebays
- Evaluate how operations (flow release timing, magnitude, and duration) could be modified to provide sediment transport flows

- Understand potential sediment inputs and impacts from higher flows to reaches below Plant 6 from proposed changes in flow/operations

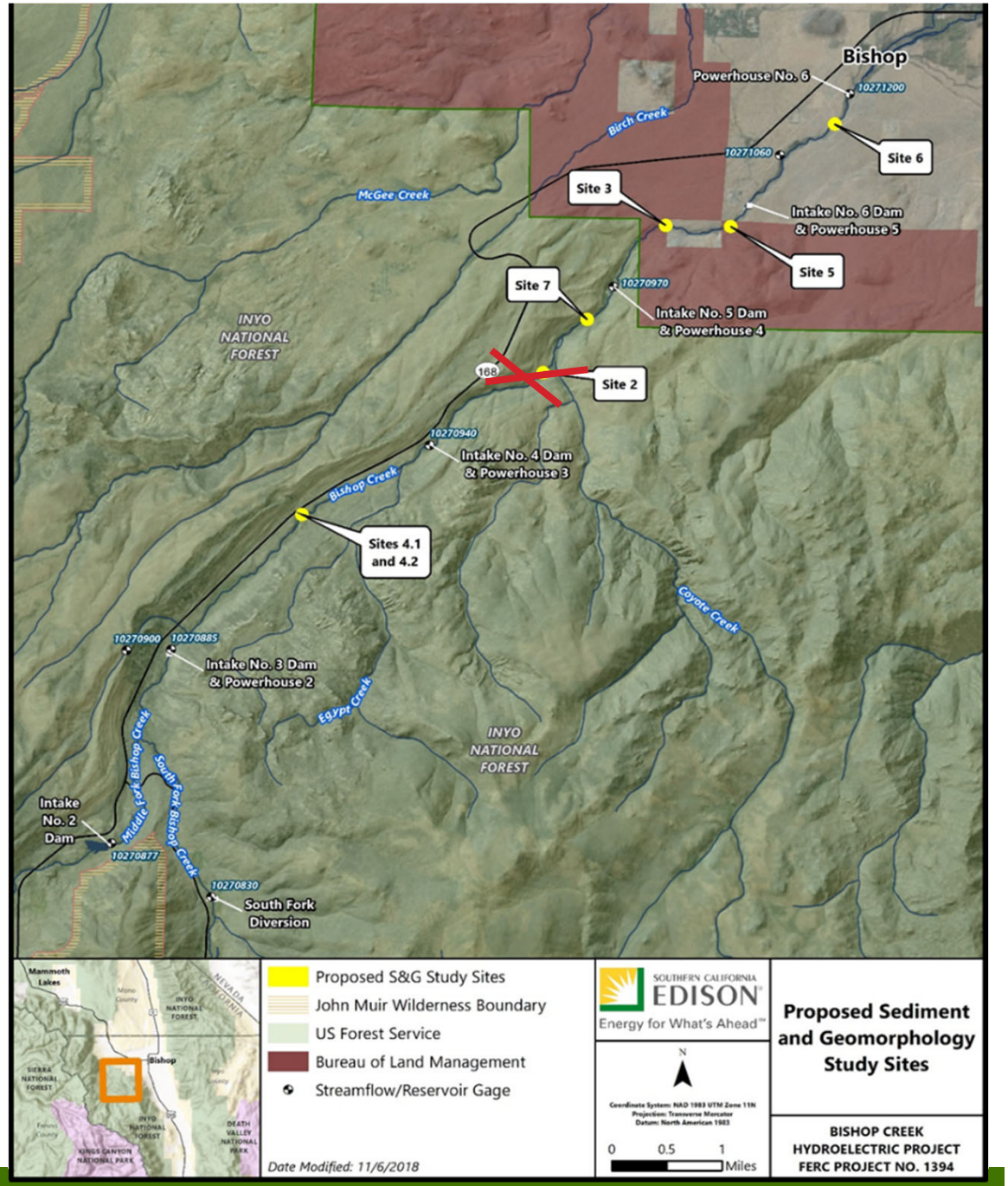
Sediment and Geomorphology – AQ 6

Study Name	Status	Modifications and/or Consultation Needed
AQ 6 – Sediment and Geomorphology	Channel and substrate surveys were conducted in September 2019. After consultation with stakeholders in 2020 regarding challenges with bedload sampling, SCE decided to perform a tracer rock study during higher flows to understand when various size substrates are mobilized. To date, flows necessary to mobilize the tracer rocks have not been seen and results may need to wait until spring of 2021.	To help resolve the question relating to sediment mobility that can't be answered by the bedload sampling that is not feasible, SCE proposed to perform a tracer rock study during higher flows to understand when various size substrates are mobilized. SCE discussed the change in methods with the TWG during review of the 2nd progress report in May 2020 and no concerns were raised.

Sediment and Geomorphology – AQ 6 Adjustments

Dropped Site #2

- Abandoned by Riparian Study previously
- Historic pins not able to be located
- No historic record of cross sections for reference



Sediment and Geomorphology - AQ 6

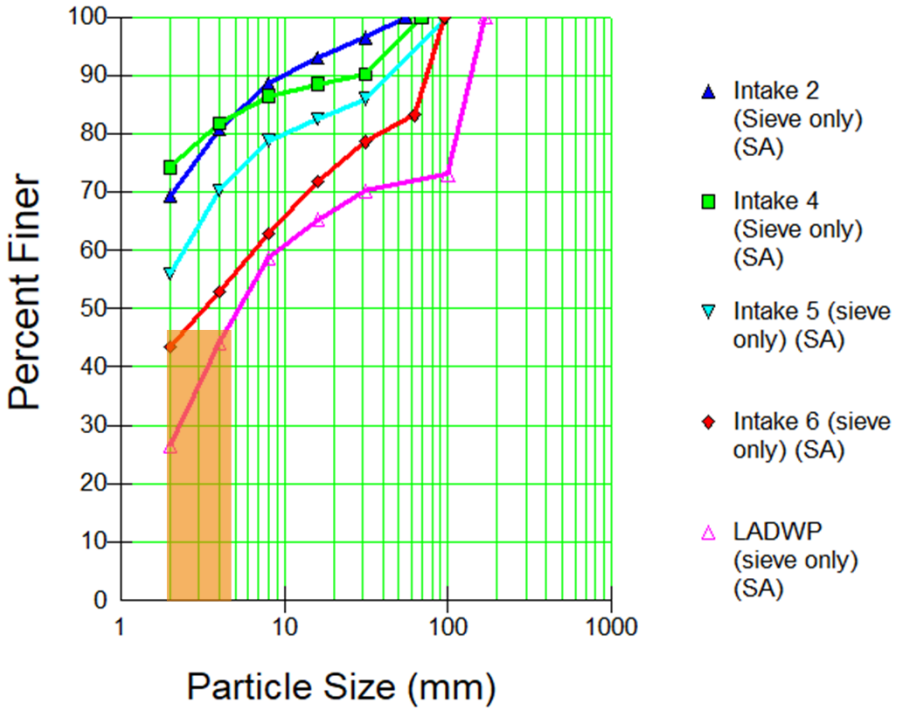
Site-wide Data Collected in 2019 at Sites 4.1, 4.2, 7, 3, 5, and 6

1. Pfankuch channel stability rating
2. Channel slope
3. Riffle Substrate D50 and D84
4. LWM assessment
5. Sediment sizing for excavated sediments from Intakes 2, 4, 5, and 6, and LADWP impoundment

Sediment and Geomorphology - AQ 6

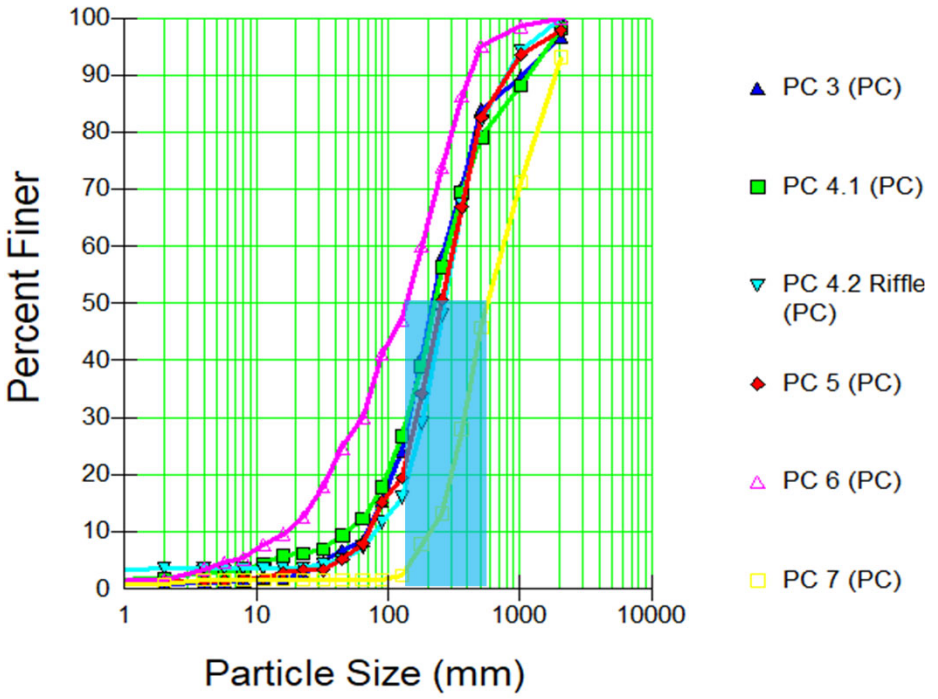
Preliminary Results: Sediment Sizes

Intake Sediment



D50: <6 mm

Bishop Riffles



D50: 150-600 mm

Sediment and Geomorphology - AQ 6

- Large Woody Material Summary from ISR

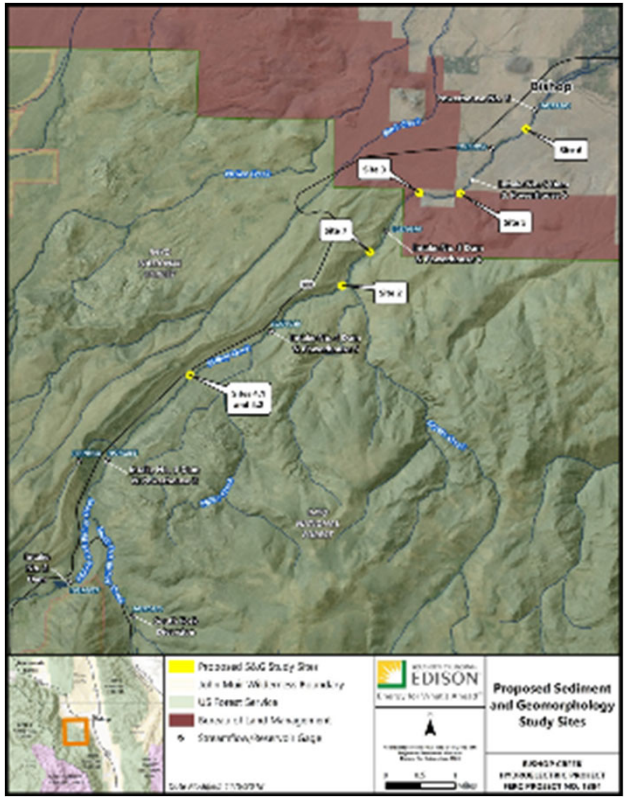
Large Woody Material

Site	Site Length (ft)	Zones										Total	
		WET		WET/BKF		BKF		BKF/RIP		RIPARIAN			
		#	#/ 100 LF	#	#/ 100 LF	#	#/ 100 LF	#	#/ 100 LF	#	#/ 100 LF	#	#/ 100 LF
4.1	258	1	0.4	8	3.1	2	0.8	7	2.7	1	0.4	19	7.4
4.2	231	1	0.4	0	0.0	8	3.5	0	0.0	16	6.9	25	10.8
7	290	5	1.7	3	1.0	21	7.2	0	0.0	235	81.0	264	91.0
3	278	0	0.0	5	1.8	0	0.0	0	0.0	3	1.1	8	2.9
5	285	2	0.7	0	0.0	8	2.8	0	0.0	15	5.3	25	8.8
6	249	0	0.0	0	0.0	1	0.4	0	0.0	12	4.8	13	5.2

Sediment and Geomorphology - AQ 6 Ongoing work

- Dropped Bed Sediment Transport Study
- Added Tracer Rock Study

1. Objective:
   a. confirm that most small (<60 mm) substrates are mobilized through the Project during high flows
   b. better understand substrate mobility during high flows
2. At 2 existing study sites: Site 4 and Site 6
3. "tag" tracer rocks of desired size classes (32-360 mm)
   a. Paint
   b. PIT tag
4. Recover tracer rocks after a high flow
5. Determine size class mobilized by highest flow
6. Use to inform Task 5: Evaluation of flushing flows



Sediment and Geomorphology - AQ 6

- Status and Schedule
  - Tracer rocks deployed over winter low- flow period in anticipation of high spring flows
  - Recover tracer rocks when river is accessible
    - Potential early spring 2021 before full runoff to document intermediate flows, dependent on weather and site accessibility
    - Planned recovery during low flows in late summer (Aug/Sept 2021)
  - Analyze data and develop final report (Oct/Nov 2021)

- BREAK
- We will resume the meeting at 12 PST

Cultural Resources – CUL 1

Cultural Resources – CUL 1 Goals and Objectives

Identify Cultural Resources and Potential Project Effects to those Resources

Provide a description of the known **cultural or historical resources** of the proposed project and surrounding area. Components of this description include:

- Consult Previous Studies
- Identify New Cultural Resources in the Area of Potential Effect via Pedestrian Survey and Research
- Identify Cultural Recourses Eligible for Listing on the National Register of Historic Places
- Identify Potential Effects to Cultural Resources

Cultural Resources – CUL 1

Study Name	Status	Modifications and/or Consultation Needed
CUL 1 – Cultural Resources	The cultural resource surveys began in October 2020 and will continue through mid-November. The surveys were delayed multiple times because of the COVID-19 pandemic and most recently because of hazardous working conditions arising from western wildfires.	No changes or modifications to methods. The field schedule was delayed due to COVID-19 and air quality related to the wildfires. Any portions of the surveys not conducted in 2020 will be completed in 2021 along with National Register of Historic Places evaluations of the archaeological sites and built environmental resources.

Cultural Resources – CUL 1 Data Summary

Archaeological Sites to Date

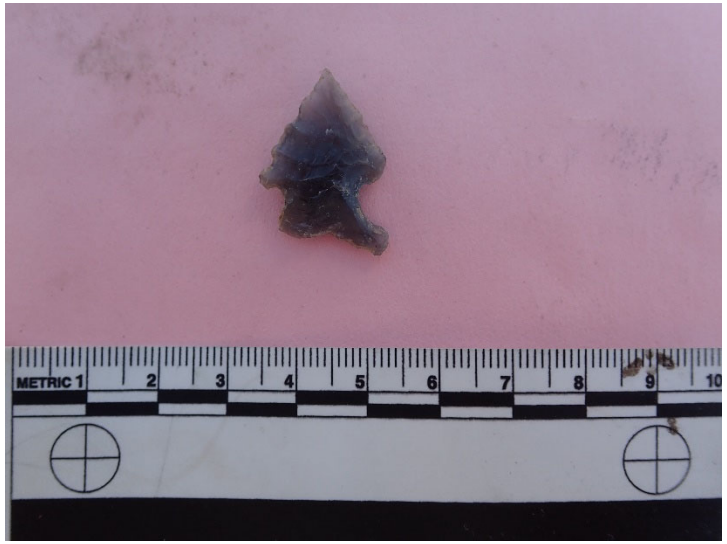
- 8 Precontact
- 9 Multi-component (Pre- and Post-contact)
- 52 Historic-Period (Nonnative and Native)

- Archaeological sites are related to habitation, mining, hydroelectric development, Basque sheep herding, roads, recreation, and irrigation.
  - Some of the archaeological sites are also Tribal Resources

Built Environment

- 100 resources recorded to date
- Built environment resources are related to the Bishop Creek Hydroelectric Project, habitation, mining, and recreation.

Precontact



Obsidian Projectile Point

Milling Slick

Multi-Component Archaeological Sites

Toy Wagon Wheel, Shell Button, Prosser Button, and Milk Can

Basketry Sizing Lid

Historic-Period Archaeological Sites

Basque Arborglyph

Structural remains

Tobacco Tin

Native American Monitor Harry Williams Standing By Paiute Ditch System In Background, Milling Slick in Foreground

Built Environment Resources

Bishop Creek Powerhouse No. 2
Constructed in 1908

Colden Trout Cabin at Cardinal Mine
Constructed in 1906

Cultural Resources – CUL 1
Planning, Schedule and Need for Changes

- Post-field follow-up research will enhance our knowledge of the resources identified to date and enable their evaluation for the National Register of Historic Places. Repositories to visit when they open:
  - Bancroft Library (Closed)
  - Eastern California Museum (Open by appointment)
  - INF/BLM (Closed)
  - Maturango Museum (Closed)
  - Visalia Archives (Closed)
- Interview Tribes and tribal elders about their knowledge of some of the Post-contact archaeological sites
- Interview local residents and hydroelectric system employees about the mines and remains of hydroelectric camps

Tribal Resources – CUL 2

Tribal Resources – CUL 2 Goals and Objectives

Identify Tribal Resources and Potential Project Effects to those Resources

Provide a description of **Indian tribes, tribal lands, and interests** that may be affected by the project. Components of this description include:

- Previous Studies
- Identify New Tribal Resources in the Area of Potential Effect via Pedestrian Survey , Research and Tribal Outreach
- Identify Tribal Recourses Eligible for Listing on the National Register of Historic Places
- Identify Potential Effects to Tribal Resources

Tribal Resources – CUL 2 Status

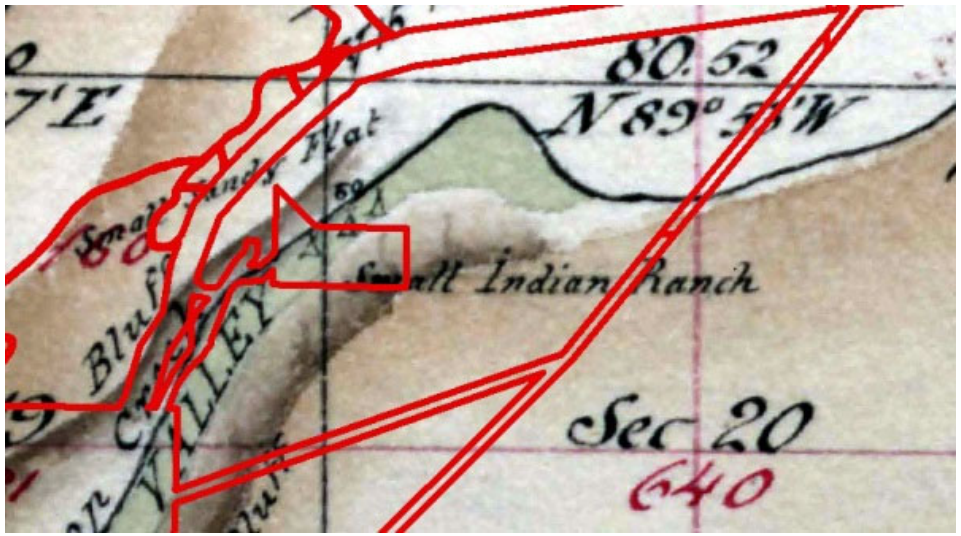
Study Name	Status	Modifications and/or Consultation Needed
CUL 2 – Tribal Resources	This study is being implemented in 2020 and 2021.	Due to COVID-19, the Relicensing Team has not been able to schedule interviews with tribes and tribal elders. The California Stay-at-Home order in the Spring of 2020 impacted interviews surrounding flowering season which are planned for Spring 2021. Background research has been initiated and no changes to methods are expected.

Tribal Resources – CUL 2 Data Summary

Results to date include 5 Tribal Resource types:

- Native American sites related to the post-contact American Period
- Ethnobotanical areas of gathering and plant tending;
- Irrigation system;
- Bishop Creek Battleground; and
- Areas of spiritual value or association

Ethnohistoric Areas

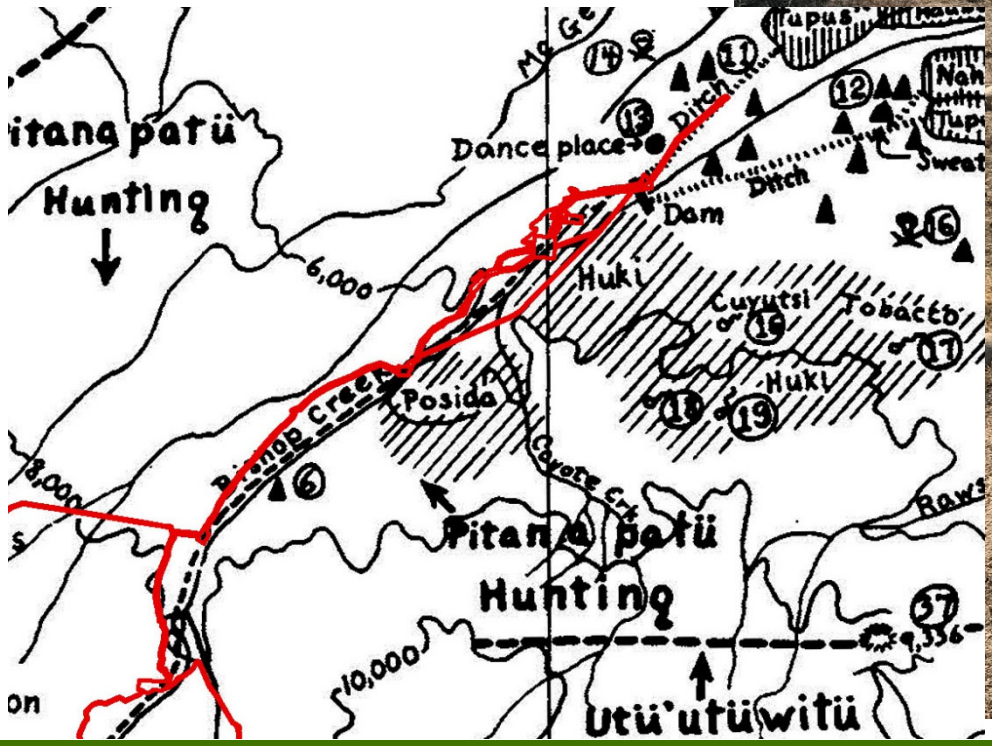


1880 General Land Office Plat with FERC Boundary Overlain (in red)

2020 Artifacts found at Indian Ranch

Ethnobotanical Areas

Paiute Ditch System - Used Water from Bishop Creek, documented by Julian Steward 1933



Bishop Creek Battleground

California Registered Historic
Landmark No. 811

Tribal Resources – CUL 2
Upcoming Research

- Conduct additional background research when archival repositories reopen
- Interview tribes and tribal elders about their knowledge of project, when conditions allow

Interviews and additional research may identify additional tribal resources:

- Ethnozoological connection with hunting, fishing, and gathering in project area
- Connections with the Hydro Project (e.g. employment during construction or operations)
- Identify any tribal council positions on access to resources

Invasive Plants– TERR 2

Invasive Plants – TERR 2 Goals and Objectives

- This study surveyed populations of invasive plants in the Project area and recreational facilities in 2019 and 2020, including surveys for black locust (*Robinia pseudoacacia*) upstream of Plant 4.
- This information will be incorporated into a plan for control/containment to ensure that future Project facilities and operations are consistent with the Desired Conditions, Goals, and Standards described in the Land Management Plan for the Inyo National Forest (USDA 2018) as they relate to ecological sustainability and biodiversity. [Deferred to PM&E discussion]

Invasive Plants – TERR 2 Status

Study Name	Status	Modifications and/or Consultation Needed
TERR 2 – Invasive Plants	SCE conducted surveys for invasive plants on multiple visits to the study area during the 2019 field season, focused on a 500-foot survey area around each Project facility (i.e., powerhouses, dams, diversions, value houses, access roads, and recreation facilities within the Project area) and a larger survey area around Powerhouse No. 4 to document black locust populations. Final surveys at recreation facilities and Powerhouse No. 4 were conducted during the 2020 survey period.	No changes or modifications to methods. Following the ISR meeting, authors will work to finalize technical reports provided no additional survey work is needed.

Invasive Plants – TERR 2 Data Summary

Invasive plants observed during field surveys

Scientific Name	Common Name	Cal-IPC Rating
Bromus diandrus	ripgut grass	Moderate
Bromus rubens	red brome	High
Bromus tectorum	cheat grass	High
Cirsium vulgar	bull thistle	Moderate
Cynodon dactylon	Bermuda grass	Moderate
Dactylis glomerata	orchard grass	Limited
Descurainia sophia	tansy mustard	Limited
Erodium cicutarium	redstem filaree	Limited
Festuca arundinacea	tall fescue	Moderate
Holcus lanatus	common velvet grass	Moderate
Plantago lanceolata	English plantain	Limited
Robinia pseudoacacia	black locust	Limited
Rubus armeniacus	Himalayan blackberry	High
Rumex crispus	curly dock	Limited
Salsola tragus	Russian thistle	Limited
Sisymbrium altissimum	tumble mustard	Not listed
Taraxacum officinale	common dandelion	Not listed
Verbascum thapsus	woolly mullein	Limited

Invasive Plants – TERR 2 Schedule

- Study complete, no changes or additional studies anticipated.

Special Status Plants – TERR 3

Assessment of Special Status Plants – TERR 3 Goals and Objectives

- This study surveyed for special status plants (including aquatic plants) in the Project area and Project affected reaches in 2019 and 2020.

- This information will be used to assess the extent to which the Project may affect rare, threatened, endangered or other special status species and develop a management plan to ensure that future Project facilities and operations are consistent with the Desired Conditions, Goals and Standards described for animal and plant species in the Land Management Plan for the Inyo National Forest (USDA 2018) [Deferred to PM&E discussion].

Assessment of Special Status Plants – TERR 3 Status

Study Name	Status	Modifications and/or Consultation Needed
TERR 3 – Assessment of Special Status Plants	SCE conducted surveys for special status plants on multiple visits to the study area during the 2019 field season. The study area consisted of a 500-foot survey area around Project facilities including powerhouses, dams, diversions, valve houses, and access roads. Final surveys at recreation facilities will be conducted during the 2020 survey period.	No changes or modifications to methods and no additional field work is anticipated for the duration of this relicensing process. Following the ISR meeting, authors will work to finalize technical reports provided no additional survey work is needed.

Assessment of Special Status Plants – TERR 3 Data Summary

Scientific & Common Name	Federal Status	State Status and CRPR Rank	Habitat	Survey Results
Eriastrum sparsiflorum few-flowered eriastrum	No Fed. status	CRPR 4.3	Chaparral, cismontane woodland, Great Basin scrub, Joshua tree woodland, Mojavean desert scrub, and pinyon and juniper woodland from 3,527 ft. to 5,610 ft.	This species was observed in 2019 at multiple locations downstream of the Bishop Creek South Fork Diversion Dam, downstream of Plant 4, and at the Birch Creek riparian monitoring site. Not observed in 2020 surveys of the recreational areas.
Lomatium rigidum stiff lomatium	No Fed. status	CRPR 4.3	Great Basin scrub and pinyon and juniper woodland from 3,937 ft. to 7,218 ft.	This species was observed in 2019 at multiple locations within the Project vicinity. Not observed during the 2020 surveys of recreational areas.
Parnassia parviflora small-flowered grass-of-Parnassus	No Fed. status	CRPR 2B.2	Wet areas, meadows and rocky seeps from 6,594 ft. to 9,104 ft.	This species was observed in 2019 at the Birch Creek Diversion. Not observed in during the 2020 surveys of recreation areas.

Assessment of Special Status Plants – TERR 3 Data Summary cont.

Scientific & Common Name	Federal Status	State Status and CRPR Rank	Habitat	Survey Results
Penstemon papillatus Inyo beardtongue	No Fed. status	CRPR 4.3	Pinyon and juniper woodland and subalpine coniferous forest from 6,562 ft. to 9,843 ft.	Not observed during 2019 survey effort around the facilities but was observed in 2019 at the riparian monitoring site located downstream of the McGee Creek diversion dam. Not observed in the recreation areas in 2020.
Ranunculus hydrocharoides frog's-bit buttercup	No Fed. status	CRPR 2B.1	In or bordering shallow springs or freshwater marshes and seeps from 4,133 ft. to 7,611 ft.	This species was observed in 2019 in mesic areas at PH3/Intake 4. Not observed during 2020 surveys of the recreation areas.
Triglochin palustris marsh arrow-grass	No Fed. status	CRPR 2B.3	Meadows and seeps, freshwater marsh, subalpine coniferous forest from 6,988 ft. to 11,597 ft.	This species was observed in 2019 at the Birch Creek diversion.

Assessment of Special Status Plants – TERR 3

- Study complete, no changes or additional studies anticipated.

Instream Flow Needs and Assessment – AQ 1

Instream Flow Needs and Assessment – AQ 1 Study Goals and Objectives

- Determine the range of flows necessary to provide suitable habitat for:
  - brown trout population in Bishop Creek
    - Middle and South forks of Bishop Creek,
    - Bypass reaches below intakes 2-6,
    - Below the South Fork Diversion,

  - Potential native non-game species below Plant 4
  - Brook trout and Owens speckled dace in Birch and McGee creeks

Instream Flow Needs and Assessment – AQ 1 2020 Activities

- Owens Speckled dace
  - HSC data developed by CDFW and developed into curves in consultation with CDFW
- HCM assessment of Reaches 4 and 6
- Scoped and surveyed Birch and McGee creeks for brook trout and Owens speckled dace habitat suitability using HCM method or equivalent

Instream Flow Study Status

Study Name	Status	Modifications and/or Consultation Needed
AQ 1 – Instream Flow Needs and Assessment	**April 2020**. SCE consulted further with California Department of Fish and Wildlife (CDFW) and U.S. Forest Service (USFS) to develop Habitat Suitability Criteria (HSC) for Owens speckled dace, which will be applied to study reaches 1 and 2. **September 2020**. SCE collected data to support a Habitat Criteria Method (HCM) analysis for reaches 4 and 6 as recommended by USFS, and also for the Birch and McGee creeks study sites.	Following the ISR meeting, authors will work on final technical reports No additional survey work is anticipated.

Instream Flow Needs and Assessment – AQ 1

- McGee Creek surveyed at
  - 0.5, **1.0**, and 2.0 cfs
- Birch Creek surveyed at:
  - 0.13, **0.25,** and 1.0 CFS

McGee Creek study site

- Reach 4 surveyed at
  - 2, **5**, and 10 cfs
- Reach 6 surveyed at
  - 6, **13** and 25 cfs

Reach 6 study site

*Flows highlighted in **bold** are current minimum flows*

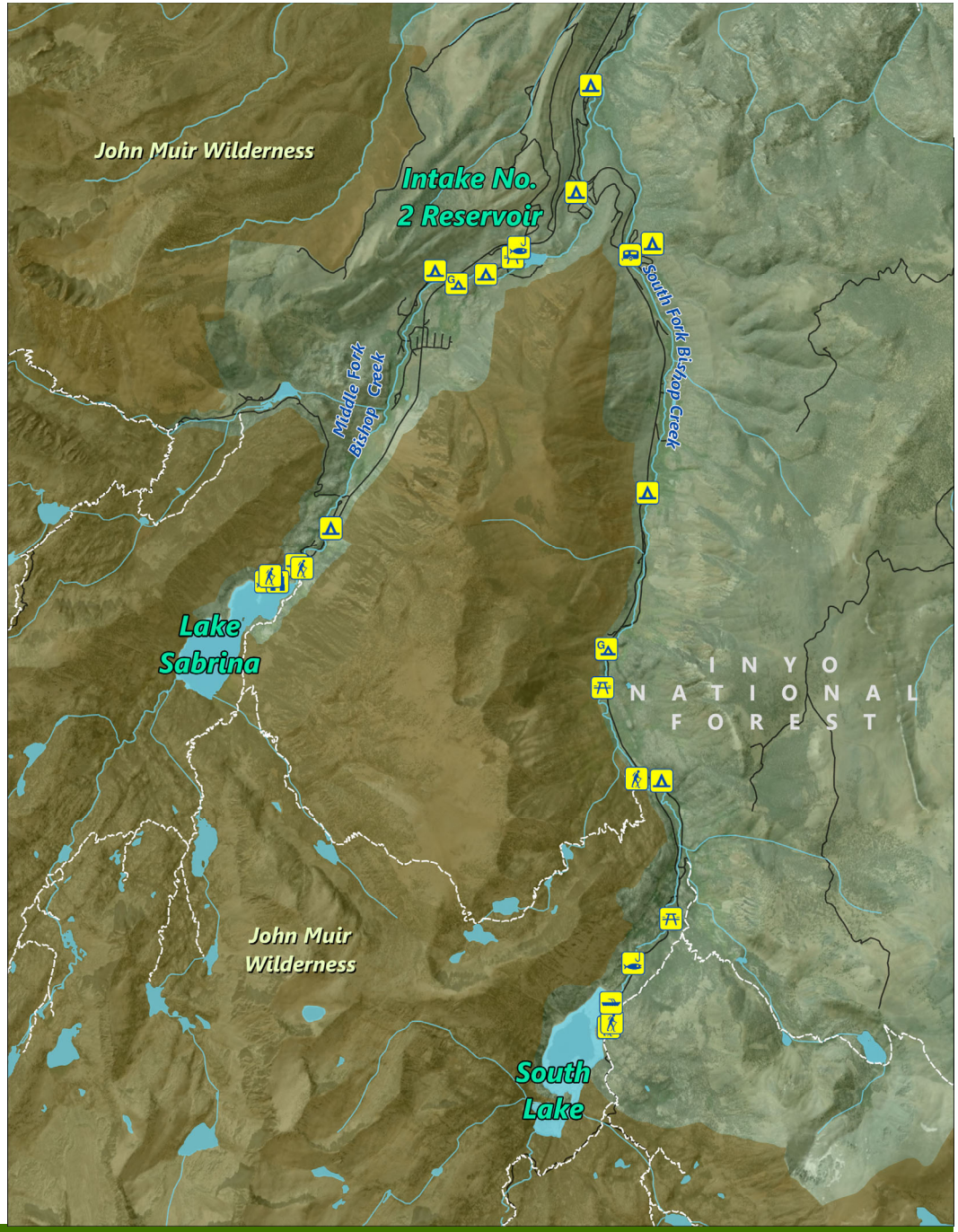
Instream Flow Needs and Assessment – AQ 1 Planning and Next Steps

- Apply HSC curves for speckled dace to Bishop Creek reaches 1 and 2 PHABSIM
- Complete analysis of 2020 field efforts to incorporate into final technical report in 2021.

Recreation Use and Needs – REC 1

Recreation Use and Needs - REC 1 Goals and Objectives

- Characterize existing use and needs
- Evaluate adequacy of existing recreation opportunities to meet current needs
- Estimate future Project-related recreational demand and needs
- Methods
  - Off-site/web-based Recreation Use Survey
  - On-site Recreation Use Survey
  - Creel Survey
  - Spot Counts
  - Traffic Counters
  - Trail Counters

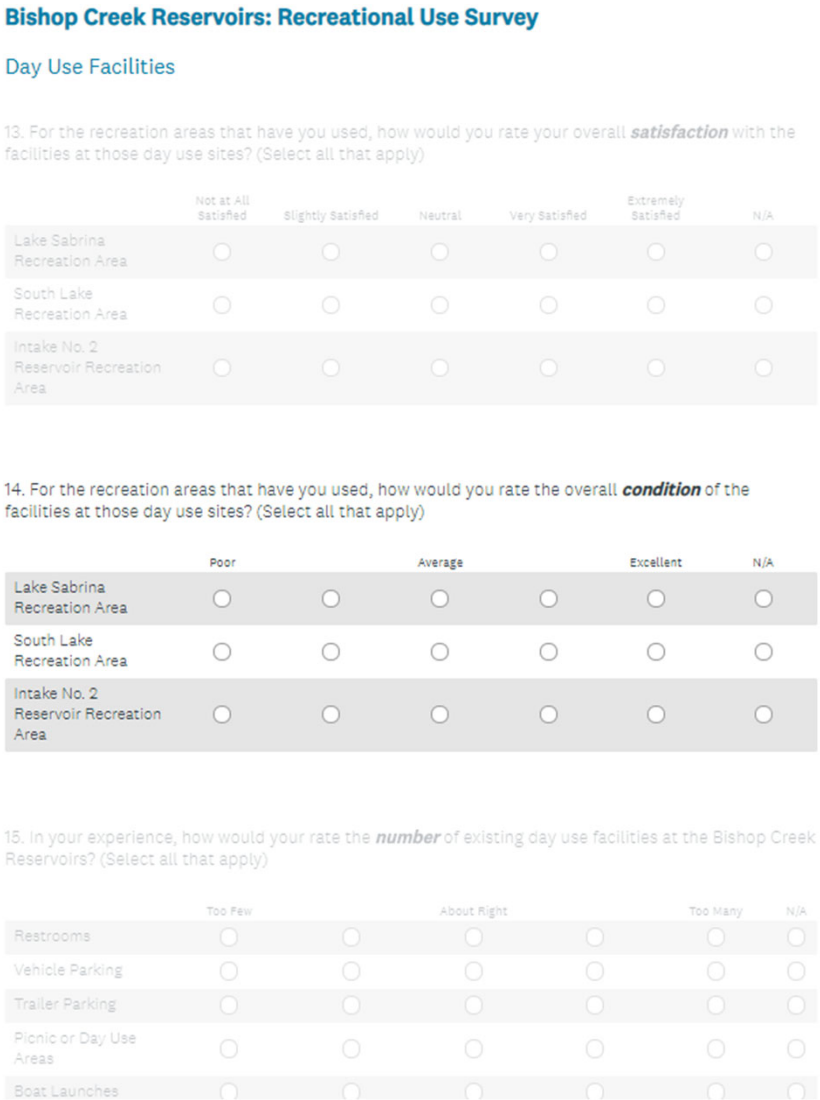


Recreation Use and Needs - REC 1 Status

Study Name	Status	Modifications and/or Consultation Needed
REC 1 – Recreation Use and Needs	Off-site recreation use surveys have been developed for 2020 and 2021 implementation. All other activities, described in REC 1 will be implemented in 2021.	Off-site surveys have been developed and placed on the Project website. Due to scheduled road work on South Lake Road, SCE developed a revised implementation schedule for the REC 1 study plan in consultation with the USFS that moves the general recreation field surveys to the 2021 recreation season. The onset of the COVID-19 pandemic further supported the decision to postpone this study.

Recreation Use and Needs - REC 1

- 2020 Activities
  - Off-site/web-based recreation survey
    - https://www.surveymonkey.com/r/BishopCreekReservoirs
- 2021 Activities
  - On-site Recreation Use Survey
  - Off-site/web-based Recreation Use Survey *[Continued]*
  - Creel Survey
  - Spot Counts
  - Traffic Counters
  - Trail Counters



Bishop Creek Reservoirs: Recreational Use Survey

Day Use Facilities

13. For the recreation areas that have you used, how would you rate your overall ***satisfaction*** with the facilities at those day use sites? (Select all that apply)

	Not at All Satisfied	Slightly Satisfied	Neutral	Very Satisfied	Extremely Satisfied	N/A
Lake Sabrina Recreation Area	○	○	○	○	○	○
South Lake Recreation Area	○	○	○	○	○	○
Intake No. 2 Reservoir Recreation Area	○	○	○	○	○	○

14. For the recreation areas that have you used, how would you rate the overall ***condition*** of the facilities at those day use sites? (Select all that apply)

	Poor		Average		Excellent	N/A
Lake Sabrina Recreation Area	○	○	○	○	○	○
South Lake Recreation Area	○	○	○	○	○	○
Intake No. 2 Reservoir Recreation Area	○	○	○	○	○	○

15. In your experience, how would your rate the ***number*** of existing day use facilities at the Bishop Creek Reservoirs? (Select all that apply)

	Too Few		About Right		Too Many	N/A
Restrooms	○	○	○	○	○	○
Vehicle Parking	○	○	○	○	○	○
Trailer Parking	○	○	○	○	○	○
Picnic or Day Use Areas	○	○	○	○	○	○
Boat Launches	○	○	○	○	○	○

Recreation Facilities Condition & Public Accessibility – REC 2

Recreation Facilities Condition & Public Accessibility - REC 2 Goals and Objectives

- For Project-related recreation areas, assess the condition of existing recreation facilities
  - Full Facilities Condition Assessment and Inventory
- Assess the need to formalize or reclaim (due to environmental concerns) dispersed or informal use areas
  - Dispersed Use Assessment
- Analyze economics of current and future Project-related O&M of recreation facilities
  - Operations and Maintenance Economics Assessment

Recreation Facilities Condition and Public Accessibility - REC 2 Status

Study Name	Status	Modifications and/or Consultation Needed
REC 2 – Recreation Facilities Condition and Public Accessibility	Field work for this study (Full Facilities Condition Assessment and ground-truthing of the Dispersed Use Assessment) occurred in August 2020. Data is currently being analyzed for an expected report to TWG members in January 2021.	No changes or modifications to methods. Following the ISR meeting, authors intend to work on final technical reports provided no additional survey work is needed.

Recreation Facilities Condition & Public Accessibility - REC 2

- Facilities Condition Assessment
  - Mackay Sposito currently analyzing field data and preparing report on findings.
  - Generally, they found the parking areas to be mostly compliant from an accessibility standpoint. Those that are not could be brought into compliance fairly easily.
  - Most of the deficiencies are related to accessible routes interconnecting amenities and also access and compliance related to boating facilities.

Recreation Facilities Condition & Public Accessibility - REC 2

- Dispersed Use Assessment
  - Foot trails
  - Fire rings/campsites
  - Fishing access

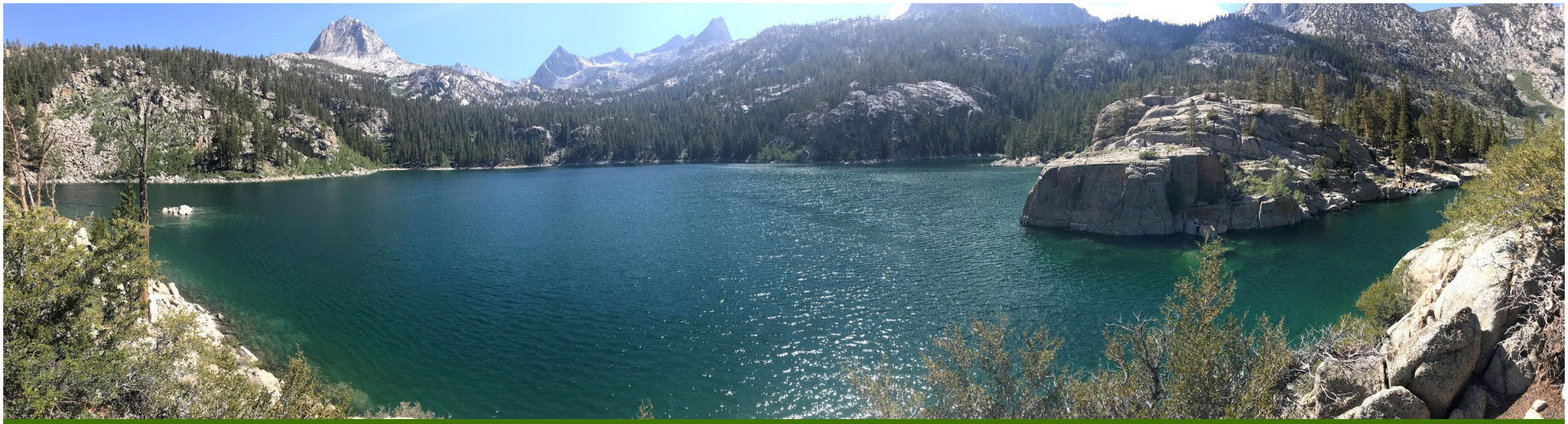
Recreation Facilities Condition & Public Accessibility - REC 2

- 2020/2021 Remaining Activities
  - Data analysis
  - REC 2 technical report

Project Boundary and Lands – LAND 1

Project Boundary and Lands - LAND 1 Goals and Objectives

- Assess Project boundary for accuracy
- Determine Project lands needed for operation (including roads and spoil areas)
- Assess Project boundary for potential modifications
- Confirm ownership of Project lands



Project Boundary and Lands - LAND 1 Status

Study Name	Status	Modifications and/or Consultation Needed
LAND 1 – Project Boundary and Lands	This is an ongoing study and analysis of Project lands that will be conducted in both 2020 and 2021.	No changes or modifications to methods.

Project Boundary and Lands - LAND 1

- 2020 Activities
  - Accuracy of SCE land ownership boundaries.
  - Accuracy of federal land ownership boundaries and designations and related acreage used in the calculation of annual charges for use of federal lands.
  - Accuracy of centerline and buffers depicted for linear features (transmission line, penstocks, flowlines, rivers, roads).
  - Accurate inventory of roads needed for Project purposes.
  - Accurate inventory of spoil sites needed for Project purposes.
  - Wilderness boundaries in relation to the current Project boundary.
  - Recreational lands and dispersed use areas at Intake 2, Sabrina Lake, and South Lake
- 2021 Activities
  - Continue to assess Project boundary
  - Research land ownership
  - Consult with USFS/BLM regarding potential addition or removal of Project lands

Wildlife Resources

Wildlife Study – TERR 1 Goals and Objectives

- Determine if mule deer and/or other wildlife use at existing crossing structures.
- Identify management and other special status species from existing information and site-specific surveys in the Project area including:
  - Yosemite toad and Sierra yellow-legged frog
  - Southwestern willow flycatcher
  - Goshawk
  - Bats
- To protect avian species that use existing project transmission facilities under the current license

Wildlife Study – TERR 1 Status

Study Name	Status	Modifications and/or Consultation Needed
TERR 4 – Wildlife	Surveys for general wildlife, special status amphibians, and a bat habitat assessment were performed in 2019. A winter roost survey was conducted in January 2020 and bat acoustic surveys were conducted in June 2020.	General wildlife surveys were reduced to one field survey in 2019 and are now complete. In June 2020, two new cameras were placed at wildlife crossing areas to replace those stolen in 2019. Following the ISR meeting, authors will work to finalize technical reports provided no additional survey work is needed.

Wildlife Study – TERR 1

- **Data Summary**
  - Mule deer and other wildlife utilize the crossings
    - ie. grey fox, mountain lion, long-tailed weasel, Mt. Pinos sooty grouse, etc.
  - Bats utilize for summer roosting but not winter roosting
    - ie. Powerhouse 5 and the transformer shed at Powerhouse 2
  - 10 species of bats were determined to be foraging at Project facilities
    - ie. *Myotis californicus, M. ciliolabrum, M. lucifugus, M. volans, M. yumanensis, Aorestes cinereus, Eptesicus fuscus, Lasionycteris noctivagans, Parastrellus hesperus*, and *Taderida brasiliensis*.
  - No special status amphibian species found
  - Goshawk nesting activities observed on Birch Creek
  - No suitable southwestern willow flycatcher nesting habitat present.
- **Planning, Schedule and need for changes**
  - No additional studies are needed.

SOUTHERN CALIFORNIA EDISON®
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Questions

Next Steps and Action Items

- Meeting Summary no later than 15 days after meeting
  - No later than November 25
  - SCE will alert TWG members when meeting summary is filed
- TWG Comments on meeting summary within 30 days
- Dispute resolution pathway if necessary

ATTACHMENT 2 – MEMORANDUM: AGING OF FISH FROM RESERVOIR FISH DISTRIBUTION STUDY (AQ 4)

MEMORANDUM

TO: Bishop Creek relicensing team

FROM: Brandon Kulik

DATE: November 18, 2020

RE: **Aging of fish from Reservoir Fish Distribution Study (AQ 4)**

Sabrina and South lakes were both sampled during the 2020 field season with boat electrofishing as part of relicensing studies scoped during 2019. An agreed-to protocol in the approved study plan was to collect Opercula and scales from reservoir sampled fish to facilitate gathering of age class data for the benefit of California Department of Fish and Game's (CDFW) ongoing management of these fisheries. For reasons explained below, SCE is proposing to drop the analysis of these scales and opercula from the study.

In scoping the study, the Aquatics Technical Working Group (TWG) stated that there was no current information regarding the distribution of both game and non-game fish species of management interest in the Project area. Therefore, Study Plan goals and objectives included:

- Characterize populations and status of fish species in Lake Sabrina and South Lake
    - Document presence and/or absence of Owens Sucker in Lake Sabrina and South Lake
    - Assess distribution of other fish species in Project reservoirs
- Evaluate select, localized water quality parameters that may affect the growth and distribution of fish species
- Ensure that future Project facilities and operations are not inconsistent with the Desired Conditions described in the "Land Management Plan for the Inyo National Forest" (USDA 2018) as they relate to ecological sustainability and diversity of plant and animal communities

As reported during the November 2020 Initial Study Report meeting, sampling was completed according to the study plan parameters during June and September 2020. The presence, relative abundance, and size distributions of three species of salmonids (brown trout, rainbow trout, and brook trout) were established and Owens sucker were encountered during all sampling events in Sabrina Lake, however they were absent in South Lake.

As described by the approved study plan, Opercula were collected from Owens sucker and scales were collected from trout species. CDFW had agreed to analyze the samples to supplement their understanding age class data. Although these materials are available to CDFW, the agency stated at the ISR meeting that they no longer have staff resources available to age the related fish specimens. SCE had agreed to provide these samples to CDFW to archive and analyze; however, the scope of the study can be satisfied with the existing data. The collected data adequately quantifies the relative abundance and distribution of species present, and provides detailed length frequency information for each population relative to the environmental conditions present during sampling.

ATTACHMENT 3 – MEMORANDUM: CLARIFICATION STUDY AREA IN ASSESSMENT OF BISHOP CREEK RIPARIAN COMMUNITY INITIAL STUDY REPORT (TERR 1)

MEMORANDUM

DATE: November 12, 2020

TO: Bishop Creek Relicensing Team

CC: Technical Working Groups, Federal Energy Regulatory Commission

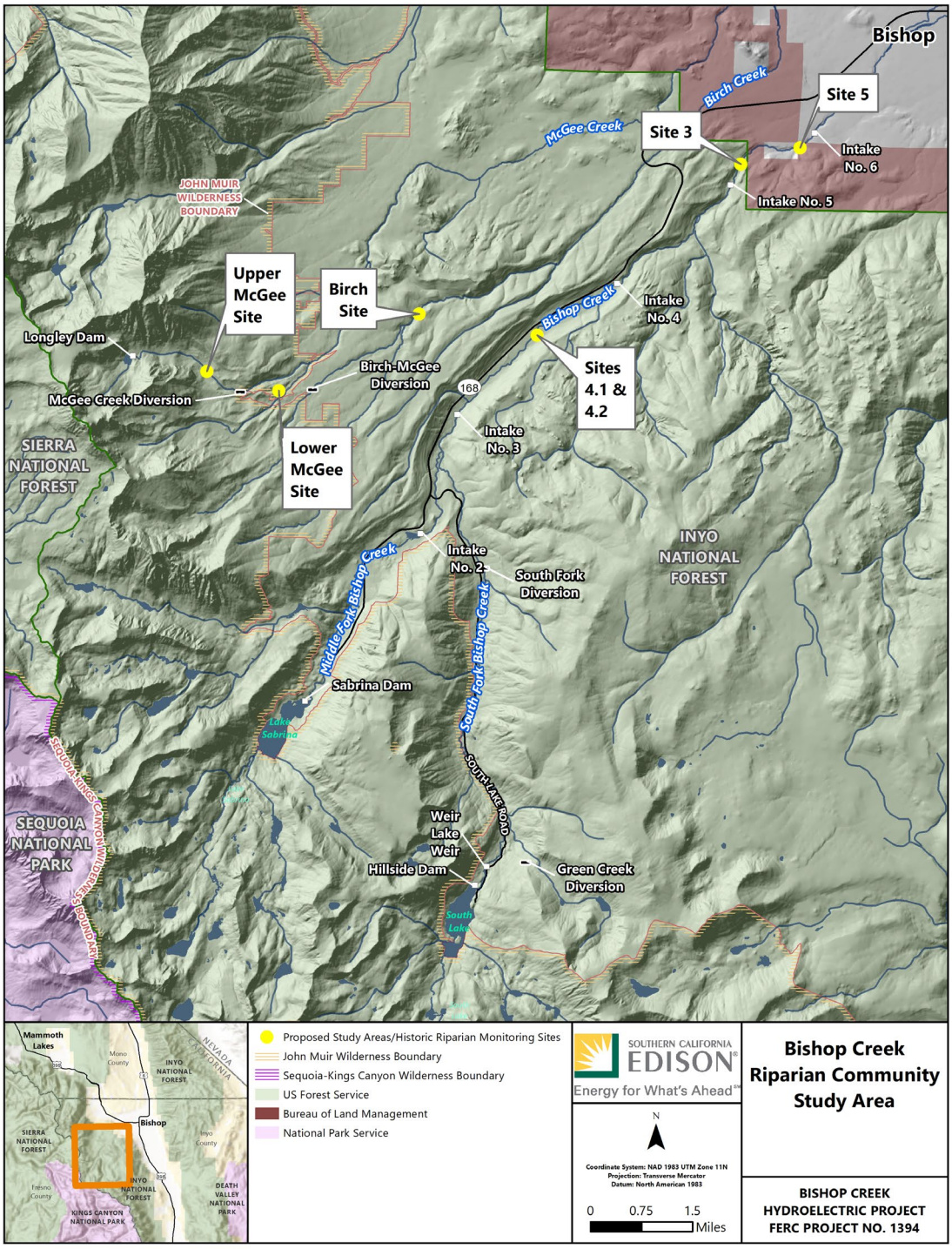
FROM: Edith Read

SUBJECT: Clarification of Study Area: Assessment of Bishop Creek Riparian Community Initial Study Report (TERR 1)

During the virtual Initial Study Report (ISR) meeting with agencies on November 10, 2020, it was pointed out that there is a discrepancy in the study sites shown in Figure 2-1 in the Riparian Study Plan and Figure 3.4-1 in the Riparian section of the ISR. The figure in the ISR is correct and is provided as Attachment 1 to this memo. It was always the intent of the riparian study to analyze complete sets of data collected through 2019. With approval of the Forest Service, three of the monitoring sites on Bishop Creek (1, 2, and 6), at which monitoring began in 1991, were dropped from the program after 2009 due to ongoing vandalism and human disturbance issues (see Attachment 2, page 2). Therefore Figure 2-1 in the study plan should have shown only the remaining sites that continued to be monitored through 2019, as shown in Figure 3.4-1 in the ISR. I apologize for not catching this error sooner.

Attachment 1

Riparian Study Sites (from ISR)


Bishop
Birch Creek
Site 5
McGee Creek
Site 3
Intake No. 6
Intake No. 5
JOHN MUIR WILDERNESS BOUNDARY
Upper McGee Site
Birch Site
Bishop Creek
Intake No. 4
Longley Dam
Sites 4.1 & 4.2
Birch-McGee Diversion
McGee Creek Diversion
168
Intake No. 3
SIERRA NATIONAL FOREST
Lower McGee Site
INYO NATIONAL FOREST
Intake No. 2
South Fork Diversion
Middle Fork Bishop Creek
South Fork Bishop Creek
Sabrina Dam
Lake Sabrina
SOUTH LAKE ROAD
SEQUOIA KINGS CANYON WILDERNESS BOUNDARY
SEQUOIA NATIONAL PARK
Weir Lake Weir
Hillside Dam
Green Creek Diversion
South Lake
Mammoth Lakes
Mono County
INYO NATIONAL FOREST
NEVADA
CALIFORNIA
Bishop
SIERRA NATIONAL FOREST
Inyo County
Fresno County
INYO NATIONAL FOREST
DEATH VALLEY NATIONAL PARK
KINGS CANYON NATIONAL PARK
Proposed Study Areas/Historic Riparian Monitoring Sites
John Muir Wilderness Boundary
Sequoia-Kings Canyon Wilderness Boundary
US Forest Service
Bureau of Land Management
National Park Service
SOUTHERN CALIFORNIA EDISON®
Energy for What's Ahead℠
N
Coordinate System: NAD 1983 UTM Zone 11N
Projection: Transverse Mercator
Datum: North American 1983
0 0.75 1.5
Miles
Bishop Creek Riparian Community Study Area
BISHOP CREEK HYDROELECTRIC PROJECT
FERC PROJECT NO. 1394

Attachment 2

Forest Service 2013 Letter

USDA United States Department of Agriculture | Forest Service | Inyo National Forest | 351 Pacu Lane, Suite 200
Bishop, CA 93514
(760) 873-2400
(760) 873-2538 TDD

File Code: 2770
Date: May 21, 2013

RECEIVED
MAY 29 2013
R.W KRIEGER

Russ Krieger
Vice President
Power Production Department
Southern California Edison
300 N. Lone Hill Avenue
San Dimas, CA 91773

RECEIVED
MAY 31 2013
EASTERN HYDRO DIVISION

Dear Mr. Krieger:

This letter serves to provide clarification to Southern California Edison (SCE) regarding monitoring of abiotic, vegetation and aquatic parameters on Bishop, McGee and Birch Creeks in connection with the Bishop Creek Hydroelectric (FERC # 1394).

Background:

In 1991, the Federal Energy Regulatory Commission (FERC) renewed the hydroelectric licenses for the Bishop Creek, Lee Vining Creek, and Rush Creek projects, operated by Southern California Edison (SCE). The licenses contained provisions for resource protection, including minimum flow releases. The Forest Service identified 4(e) conditions as part of the terms of the license. Those 4(e) conditions included monitoring plans for riparian vegetation and fisheries resources. The goals for riparian vegetation as stated in the FERC licenses are as follows:

- Achieve an adequate variety of vegetation types necessary to provide for the natural diversity of plant and animal communities within riparian zones affected by the Project.
- Provide for the long term stability and integrity of the watersheds affected by the Project.
- *Achieve 80% of vegetative and site potential within riparian zones affected by the Project. Progress will be made towards this goal at a rate that is adequate to significantly contribute to the achievement of long-term stability of the watersheds affected by the Project.*
- Maintain soil moisture at field capacity within the root zone for riparian vegetation throughout the growing season. This will provide adequate moisture for plant growth and reproduction, a requirement for allowing vegetation to reach the designated 80% potential.

At the time the 4(e) conditions were being developed for the Bishop, Rush and Lee Vining projects (1991), a riparian classification project was underway on the Forest. The expectation at that time was that the riparian classification, when completed, would provide the necessary information to define "80% of vegetative and site potential" in the 4(e) conditions for monitoring sites on Inyo National Forest lands. The riparian classification was never completed, in part due

to the variability of riparian systems on the Forest and a consequent need for a prohibitive sample size to produce meaningful results.

Over the past 20 years, the Inyo National Forest and SCE have spent a considerable amount of time and funding on implementing the monitoring program, with no clear determination of triggers to determine if the monitoring results indicate that the vegetation is moving towards the goal of achieving 80% of site potential. In the absence of clear, measurable triggers, there has been no basis upon which the Forest Service and SCE can determine whether or not changes are warranted in the license. As a result of our extensive meetings and discussions, the Forest believes that modification of our previously submitted monitoring plan should be made to a number of sites and parameters.

Based on the above information, SCE proposed changes to the monitoring program which are summarized below and found in more detail in Attachments 1 and 2.

Specifically, for the Bishop Creek project, delete three (of the six) sites on Bishop Creek that have seen high rates of vandalism or disturbance from recreationists. Discontinue aquatic monitoring, and fish sampling, on the remaining three sites. Continue monitoring both sites on McGee Creek, but reduce monitoring on lower Birch Creek by a few parameters, retaining only those most meaningful, on these tributary streams. Hydrologic monitoring equipment will be removed at the discontinued sites, and damaged/inoperable equipment replaced at the sites where vegetation monitoring will continue. Discontinue aquatic monitoring, and fish sampling, on the McGee and Birch Creek sites. See attachment 1 for additional details.

Attachment 2 is a revised monitoring plan that is meant to replace in its entirety the monitoring plan requirements submitted under the cover of the Forest Service's letter dated 12/22/1993 to FERC. The revised monitoring plan including the goals and objectives are deemed necessary for the adequate protection and utilization of National Forest System lands and resources. The Forest Service agrees with SCE's proposed changes in the monitoring plan.

Finally, we find the draft riparian monitoring report for the Bishop Project submitted by SCE for our review in 2010 also complies with requirements submitted under the cover of the Forest Service's letter dated 12/22/1993.

Please contact the Forests Watershed Program Coordinator, Todd Ellsworth at 760-873-2404 for additional information

Sincerely,

EDWARD E. ARMENTA
Forest Supervisor

cc: Todd Ellsworth, Cheryl Mulder

ATTACHMENT 1
SCE Proposed Changes to the Riparian /Aquatic Monitoring Programs

Bishop Creek, includes Birch and McGee Creeks (next monitoring in year 2014)

1. Delete three (of the six) sites on Bishop Creek (delete Sites 1, 2, and 6). These have been subject to high rates of vandalism or disturbance from recreational angling and camping, problems with data interpretation due to these factors, and/or loss of data. Continue monitoring reach 4 on Bishop Creek, and sites 3 and 5 on Bishop Creek, but discontinue aquatic monitoring, and fish sampling, on these sites. Remove hydrologic monitoring equipment at the discontinued sites, but replace the equipment at the sites where vegetation monitoring will continue.

2. Reduce monitoring on lower Birch Creek to parameters most meaningful for evaluating post-fire conditions and riparian recovery relative to instream flows and resource goals. Retain hydrologic parameters (soil moisture, stream stage), photo points, riparian corridor width, and site-wide inventory of riparian species occurrence and abundance. Discontinue aquatic monitoring, and fish sampling.

3. Continue monitoring both sites on McGee Creek, reach 4 on Bishop Creek, and sites 3 and 5 on Bishop Creek. No changes proposed. Replace the hydrologic monitoring equipment, which was installed in the early 1990's and is near the end of its operational life. Discontinue aquatic monitoring, and fish sampling.

ATTACHMENT 2

REVISED MONITORING PLAN

1993 LICENSE FOR FERC NO. 1394, ENCLOSURE II-A (Forest 4(e) License Conditions), part of Condition No. 5 – Mitigation Measures

MONITORING PLAN FOR THE BISHOP CREEK HYDROPOWER PROJECT

GOALS FOR RIPARIAN/AQUATIC SYSTEMS
The following goals for management were developed to fulfill Forest Land and Resource Management Plan (FLRMP) direction as it applies to the Bishop Creek hydropower project, hereafter referred to as the "Project".

1) Achieve an adequate variety of vegetation types necessary to provide for the natural diversity of plant and animal communities within riparian zones affected by the Project.

2) Provide for the long term stability and integrity of the watersheds affected by the Project.

OBJECTIVES FOR RIPARIAN/AQUATIC SYSTEMS
Objectives for achieving these goals are as follows:

1) Maintain soil moisture at field capacity within the root zone for riparian vegetation throughout the growing season. This will provide adequate moisture for plant growth and reproduction, a requirement for achieving long term stability and integrity of the watershed.

2) Maintain habitat conditions which will provide for the genetic integrity of all riparian dependent species as represented by FLRMP riparian management indicator species and/or other applicable riparian management indicator species.

3) Maintain instream flows and water levels in reservoirs and natural lakes as needed to provide medium to high quality stream habitat.

MONITORING AND REPORTING
A program of monitoring will be required to determine if the above goals and objectives are being achieved. Immediately following the second five-year monitoring interval, (i.e., following 2003), the licensee shall prepare, using the data collected as required below, an analysis of the effects of the flows cited in Condition No. 5 on riparian dependent

resources. Based upon that analysis, the licensee shall recommend any changes in flow necessary to meet the above goals and objectives. The licensee shall provide the Forest Service, the California Department of Fish and Came, and the U.S. Fish and Wildlife Service an opportunity to comment on their analysis and recommendations, and shall submit all such documentation to the Commission by no later than 6 months following the close of the monitoring period. The above procedure will be repeated after each subsequent monitoring period, i.e., every 5 years. In addition, the Forest Service reserves the right to petition the Commission to amend the flows cited in Condition No. 5 if determined necessary to meet the above goals and objectives.

The monitoring program will be conducted by SCE as follows:
1) Monitoring will continue for the term of the license.
2) SCE will ensure continuity between monitoring periods, subject to approval by the Forest Service. The Forest Service will approve transect locations and marking methodology prior to implementation. Deviations from approved methodologies must be approved by the Forest Service before their implementation.
3) SCE contractors will meet with the Forest Service for a field review prior to and at the end of each field season.
4) By March 1 of each year, SCE will provide the Forest Service with copies of all data collected, photos, data analysis, and a comparative analysis between current and past years' data. SCE and the Forest Service will then meet by March 31 for the post monitoring review.
5) Monitoring reports will include detailed descriptions of methodologies used. Repeatability of measurements within transects and quadrats will be ensured by providing adequate information on all locations.
6) Yearly vegetation measurements will be taken at time of peak vegetation production to provide for comparable data throughout the term of the monitoring plan. Seasonal aquatic measurements will be taken at the same time annually (+/- 2 weeks) to be representative of the following three periods: Pre-peak flows; Post-peak flow; Base flow.
7) Monitoring will be conducted at three existing sites on Bishop Creek (one upstream from Plant 4, two downstream from Plant 4), one existing site on Birch Creek, and two existing sites on McGee Creek. The specific number of monitoring transects and their location will be determined and/or approved by the Forest Service. Endpoints of transects will be permanently marked with either angle iron or rebar and referenced to permanent bearing points outside the riparian zone. Sites (or plots) and transects will be mapped.

8) Vegetation transects will extend beyond the riparian vegetation zone to ensure that future increases in riparian vegetation are accounted for.
9) Photo documentation will be done at the same time as the vegetation and aquatic monitoring.
10) As new methodologies and technologies become available, their usefulness and applicability to the monitoring will be evaluated. The Forest Service will have final approval regarding any changes in methodology.

ABIOTIC PARAMETERS TO BE MEASURED ONCE INITIALLY AND ONCE AT THE END OF THE TERM OF LICENSE
In addition, cataclysmic events may necessitate re-evaluation of some or all of these parameters between monitoring years.

Parameter	Units	Definition
Physiographic Valley Type	N/A	Classification of types based on landform features
Reach Types	N/A	Hydrological classification of stream reaches (e.g., gaining, losing, or in equilibrium) and classification according to Rosgen methodology
Elevation	Meters	Altitude above mean sea level
Channel Gradient	Degrees	Slope of stream channel along length of stream
Valley Slope	Degrees	Slope of surfaces beyond the active channel edge and perpendicular to the stream
Soil Profile Description	N/A	Description of soil horizon characteristics including color, structure, texture, degree of alkalinity or acidity, rooting depths by species or life form. Number of soil profiles will reflect soil variability within each site.
Soil Moisture Retention Capacity	gm/gm or %	Measure of moisture holding capacity of soil determined by gravimetric method or available water holding (field AWC) following Soil Conservation Service stnds.
Riparian Zone Width	meters	Direct measure with tape of riparian zone. Show cross-section profile in a data summary.

ABIOTIC PARAMETERS TO BE MEASURED IN 1991, 1992, 1993, AND THEN ONCE EVERY FIVE YEARS THEREAFTER (ie, 1998, 2003, etc.)

Unless otherwise indicated, daily, monthly, and yearly frequencies refer to measurements to be taken at daily, monthly, and yearly intervals year round during the year in which monitoring is conducted.

Parameter	Units	Frequency	Method or Source of Data
Streamflow	cfs	Daily	Existing SCE gaging stations
Streamflow	cfs	Weekly during growing season, then monthly at each site	Current meter or gage calibrated to existing gaging stations.
Depth to ground water	Meters	Weekly during growing season, then monthly at each site	Measured at wells to be established where physically feasible at each site
Channel width, bankfull to bankfull	Meters	Yearly, following peak flows	Direct measure on transects
Channel depth, bankfull to bankfull	Meters	Yearly, following peak flows	Direct measure along transects (note current water level height)
Soil moisture	Percent	Daily at start and continuing throughout the growing season	Reflectometer. Number and placement of reflectometers to represent riparian, upland, and riparian-upland ecotone conditions.
*For the following climatic parameters, information from the nearest location where weather data is collected, will be provided.			
Temperature	Degrees	Daily	SCE
Precipitation	Millimeters	Daily	SCE
Relative humidity	Percent	Daily	CA Dept of Water Resources, or nearest source
Wind speed	Meters/second	Daily	CA Dept of Water Resources, or nearest source

VEGETATION PARAMETERS TO BE MEASURED IN 1991, 1992, 1993, AND THEN ONCE EVERY FIVE YEARS THEREAFTER (ie, 1998, 2003, etc.)

Unless otherwise indicated, daily, monthly, and yearly frequencies refer to measurements to be taken at daily, monthly, and yearly intervals during the growing season of the year in which monitoring is conducted.

Unless otherwise indicated, vegetation parameters will be measured at the Bishop Creek and McGee Creek sites using belt transects, each five meters in width. Due to the 2009 Forks fire and related complexity of distinguishing fire recovery vs. Project effects at a fine scale, a subset of these parameters will be measured at the Birch Creek site in order to continue to monitor large scale trends (e.g. changes in riparian corridor width). This subset of parameters to be measured at the Birch Creek site is indicated with an asterisk (*).

Parameter	Units	Frequency	Method or Source of Data
Current riparian vegetation width*	Meters	Yearly	Direct measure with tape. Show cross-section profile in data summary.
Stand structure			
Canopy cover	percent	Yearly	Belt transect, by species and size/age classes.
Canopy height	Meters	Yearly	Calculate from tree and shrub heights, by species and size/age classes.

Species composition*	Percent	Yearly	Ocular estimate of absolute cover, by species.
Relative Importance			
Tree and shrub density	#/hectare	Yearly	Belt transects-count individuals by species and by size/age classes
Tree and shrub height	Meters	Yearly	Belt transects-direct measure or estimation by species and by size/age classes.
Absolute cover			
Tree/shrub cover	Percent	Yearly	Belt transect by species and by size/age classes.
Herbaceous cover	Percent	Yearly	Nested square meter plot; minimum 3 per transect.
Ground cover (rock, litter, bare ground, water, moss)	Percent	Yearly	Nested square meter plot; minimum 3 per transect using SCS standards for rock categories.
Relative cover	Percent	Yearly	Belt transect by species
Species Richness*	Number	Yearly	Display from site data for all sites, and transect data for Bishop and McGee Creek sites.
Stand Age and Productivity			
Tree diameter at breast height	Cm	Yearly	Measure along transect by species
Tree growth; Age	Cm/yr; Years	Baseline, 15 years, and 30 years	Increment bore will be taken only once per tree

Mortality Trees & Shrubs	% of Total by species on transect	Yearly	Ocular estimates, brief description of cause, include collection of damaged leaves & insects for verification.
Recruitment Seedling beds*	Number, spp	Yearly	Entire site, in channel; record substrate and location.
Seedlings	Number, spp	Yearly	Presence or absence on transects.
Tree & shrub juveniles Basal stem diameter	Millimeters	Yearly	*Populus* spp. only. Direct measure of individuals too small to increment bore.
Photo documentation Photo points*	Color digital	Yearly	Minimum of 4/transect at the Bishop Crk and McGee Crk sites: upstream, downstream, transect endpoints. Minimum of 4 at the Birch Crk site: upstream, downstream, and at least two site boundary points.
Aerial photos	1":500'	Yearly	False color infrared.

ATTACHMENT 4 – MEMORANDUM: DISCUSSION OF SCOPE AND INTENT OF AMPHIBIAN SURVEYS CONDUCTED IN BISHOP CREEK (TERR 4)

MEMORANDUM

November 19, 2020

To:
Bishop Creek Relicensing Team
Technical Working Group – Terrestrial Wildlife
Federal Energy Regulatory Commission

From:
Brad R. Blood, Ph.D. (Psomas)

Subject: Bishop Creek Relicensing: Special Status Amphibian Surveys (TERR 4)

The memorandum transmits to the Bishop Creek Relicensing Team, Technical Working Group – Terrestrial Wildlife, and the Federal Energy Regulatory Commission an status of the approved study plan for special status amphibians for the Bishop Creek Relicensing Project. Questions about this deviation arose during the Initial Study Report (ISR) meeting on November 11, 2020. The status and disposition of the amphibian data collection was discussed and agreed to by the U.S. Forest Service Inyo National Forest wildlife biologist (see below and attached e-mail: E-mail from U.S. Forest Service Inyo National Forest to Psomas dated November 18, 2020 [Attachment 1]). The field team believe that existing information, supplemented with the observations described below will provide sufficient data meet the objectives of the study (see Section 6.3 of the ISR).

The following four amphibians have a low likelihood of occurring within the project area because none are known or suspected as occurring along Bishop Creek. Tree frogs are the only known amphibian to occur within the project area. Although, protocol-level surveys for special status amphibians were not accomplished for this project, visual encounter surveys were included to validate these assumptions and document what amphibians do occur. The results of this effort did not detect Yosemite Toad, Sierra Nevada yellow-legged frog, southern mountain yellow-legged frog, and northern leopard frog. The project area is within the range of the following amphibians: arboreal salamander, yellow-blotched salamander, Sierra newt, tree frog, spadefoot toad, California toad, and bull frog.

These results were gathered as a result of the approved study plan that required surveys for special status amphibians [Yosemite Toad, Sierra Nevada yellow-legged frog, southern mountain yellow-legged frog, and northern leopard frog] be performed by a team of two qualified biologists. Biologists were to perform a pedestrian survey ahead of and at the same time as the electrofishing crew in the respective reaches of Bishop Creek. The timing and location of the surveys along Bishop Creek was coordinated with the electrofishing survey schedule so that visual surveys for special status amphibians can be performed by amphibian specialist's wading in the creek at least one day in advance of the fisheries crews electrofishing surveys. Additionally, in advance of those surveys, Psomas Biologists surveyed for special status amphibians on September 23 and September 24, 2019. They conducted diurnal and nocturnal surveys at the following electrofishing sites: Site 1, Powerhouse No. 5 and Intake 5, Site 2, Powerhouse No. 4 and Intake 5, S Branch 2, S Branch 3, Middle Branch, Site 3, Site 4, Powerhouse No. 3 and Intake 4, S Branch 1 (See Attachment 2, Exhibit 1)

The primary purpose of the surveys was to ensure no special status amphibians, if they occur, would be subjected to electrofishing. Extra survey efforts expanded beyond lotic systems to increase opportunity for detecting other incidental amphibians species across terrestrial landscapes like under substrates or at project infrastructure, and nocturnal movements.

Electrofishing occurred late September 2019. The weather and temperatures for those surveys were appropriate for amphibian surveys.

The Inyo NF biologist and Psomas biologist agreed this approach would likely foster the greatest possibility for detecting amphibians while confirming negative data of the special status species. Additionally, the Study Plan reported that

occurrence is unlikely for all special status amphibians and Psomas received no comments from the U.S. Fish and Wildlife Service or California Department of Fish and Wildlife to the contrary. The unlikely occurrence is further based on the literature review. Yosemite toad has not been reported from along Bishop Creek (CDFW 2020). There is one record from 1985 in the CNDDB for the Sierra Nevada yellow-legged frog from the Project Area "South Fork Bishop Creek, Aspen Meadows Campground area, 2.5 miles SE of Aspendell, 13 air miles SW of Bishop, Inyo NF." No further sightings have been reported. All other reports are from high mountain lakes at elevations well above the project area and from the other side of the divide on the western slope of the Sierra Nevada (CDFW 2020). There are no records for the southern mountain yellow-legged frog from Inyo County (CDFW 2020). There is one record for the northern leopard frog in the project area from Birch Creek in 1960, and there have been no reported occurrences since that time (CDFW 2020). A further comment on the northern leopard frog: natural populations of this species most likely occur in Modoc and Lassen Counties, other may be the result of introductions (Jennings and Hayes 1994; Smith and Keinath 2007).

Further ongoing surveys by CDFW for Sierran yellow-legged frog surveys are in the high mountain lake well above the Project area (CDFW 2018). Furthermore Bishop Creek is not considered a Sierran yellow-legged frog population creek (Attachment 2, Exhibit 2). Between the lake and the project area are streams and lakes that support large populations of non-native introduced stocked trout by CDFW, which are known to predate amphibians such as the Sierran yellow-legged frog. The presence of predatory trout strongly suggests that the survival of the Sierran yellow-legged frog in Bishop Creek is very unlikely (Jennings 1996; Knapp 1996; USFWS 2013).

Therefore, as the goal was to ensure no special status amphibians were negatively affected during electrofishing activities and to develop a species list of incidental amphibians for the project, we have determined that we have achieved this goal for this study and that no further surveys for special status amphibians are necessary.

CITATIONS

California Department of Fish and Wildlife (CDFW). 2018. Sierra Nevada Yellow-legged Frog (SNYLF) and Mountain Yellow-legged Frog (MYLF) (northern distinct population segment [DPS]) Field Season 2017.

California Department of Fish and Wildlife (CDFW). 2020. California Natural Diversity Database (CNDDB) Records of Occurrence for: Coyote Flat, North Palisade, Tungsten Hills, Mt. Darwin, Mount Tom, Bishop, and Mt. Goddard, California. Sacramento, CA: CDFW, Natural Heritage Division.

Jennings, M. R. 1994. Amphibians. Sierra Nevada Ecosystem Project. Final Report to Congress. Vol II.: 921 – 944.

Jennings, M.R. and M. Hayes. 1996. Amphibian and Reptile Species of Special Concern in California. CDFW.

Should you have any questions concerning the content of this memorandum please contact Brad Blood via e-mail: bblood@psomas.com.

Attachments: 1 E-mail from U.S. Forest Service Inyo National Forest to Psomas dated November 19, 2020
2 Exhibits 1 and 2

R:\Projects\KLE\3KLE010102\Wildlife Surveys\Amphibian\Amphibian Survey Memo-111920.docx

ATTACHMENT 1

E-MAIL FROM U.S. FOREST SERVICE INYO NATIONAL FOREST TO PSOMAS DATED NOVEMBER 18, 2020

From: Schlick, Kary -FS
To: Brad Blood
Subject: FERC Amphibian Report FINAL
Date: Thursday, November 19, 2020 10:17:43 AM
Attachments: image001.png
image002.png
image003.png
image004.png
Amphibian_Summary_BishopCkFERC_FINAL.docx

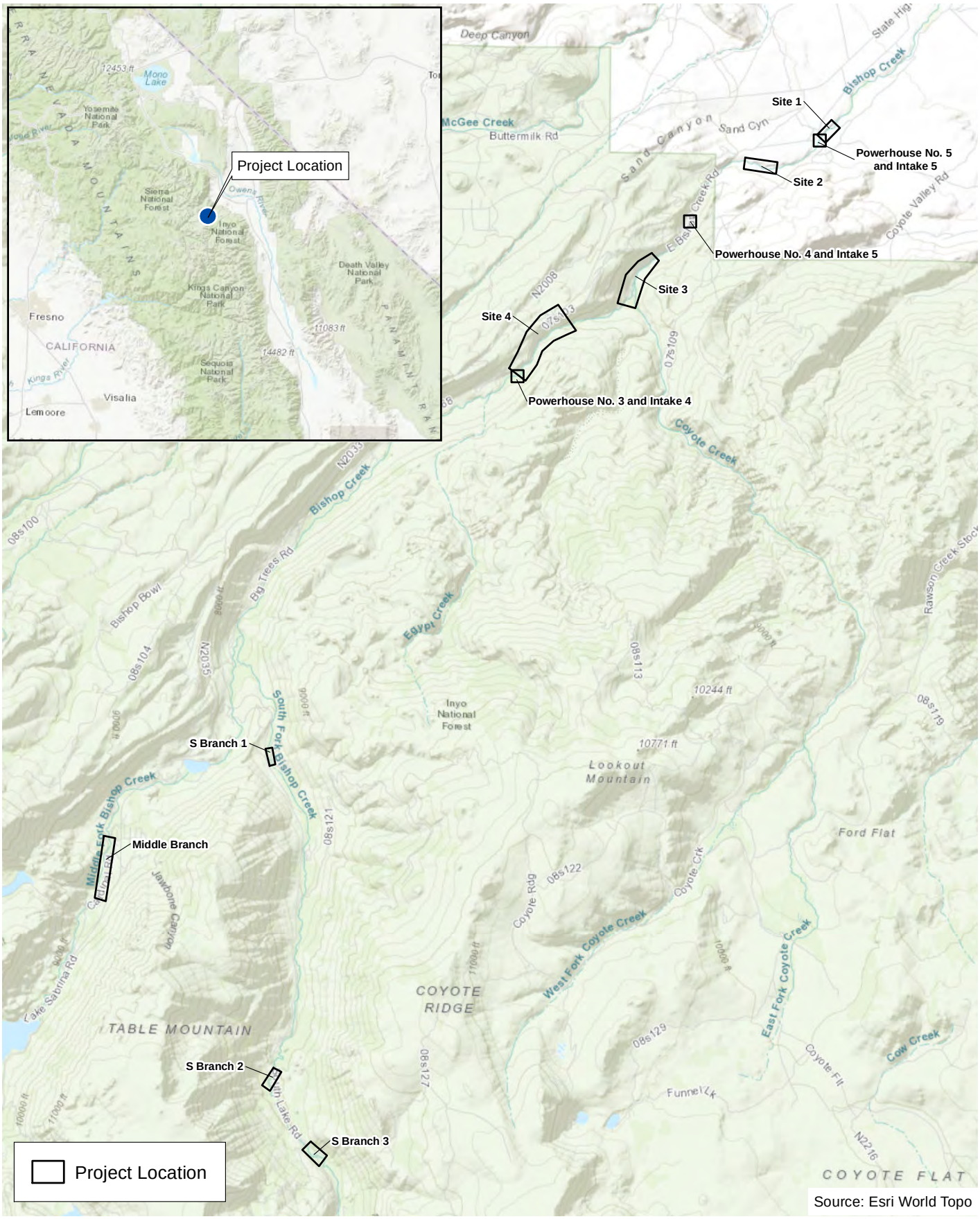
Looks good thanks again Brad,

Kary Schlick
Fish & Wildlife Biologist
Forest Service
Inyo National Forest
p: 760-873-2450
f: 760-873-2458
kary.schlick@usda.gov
351 Pacu Lane
Bihsop, CA 93514
www.fs.fed.us

Caring for the land and serving people

ATTACHMENT 2

EXHIBITS 1 AND 2



D:\Projects\3KLE\010102\MXD\ex_LV_RL_20191011.mxd

Regional and Local Vicinity

Exhibit 1

Bishop Creek Hydroelectric Relicensing Project

N
W E
S

6,500 3,250 0 6,500

Feet

PSOMAS

(Rev: 10-14-2019 RMB) R:\Projects\KLE\3KLE010102\Graphics\ex_LV_RL.pdf

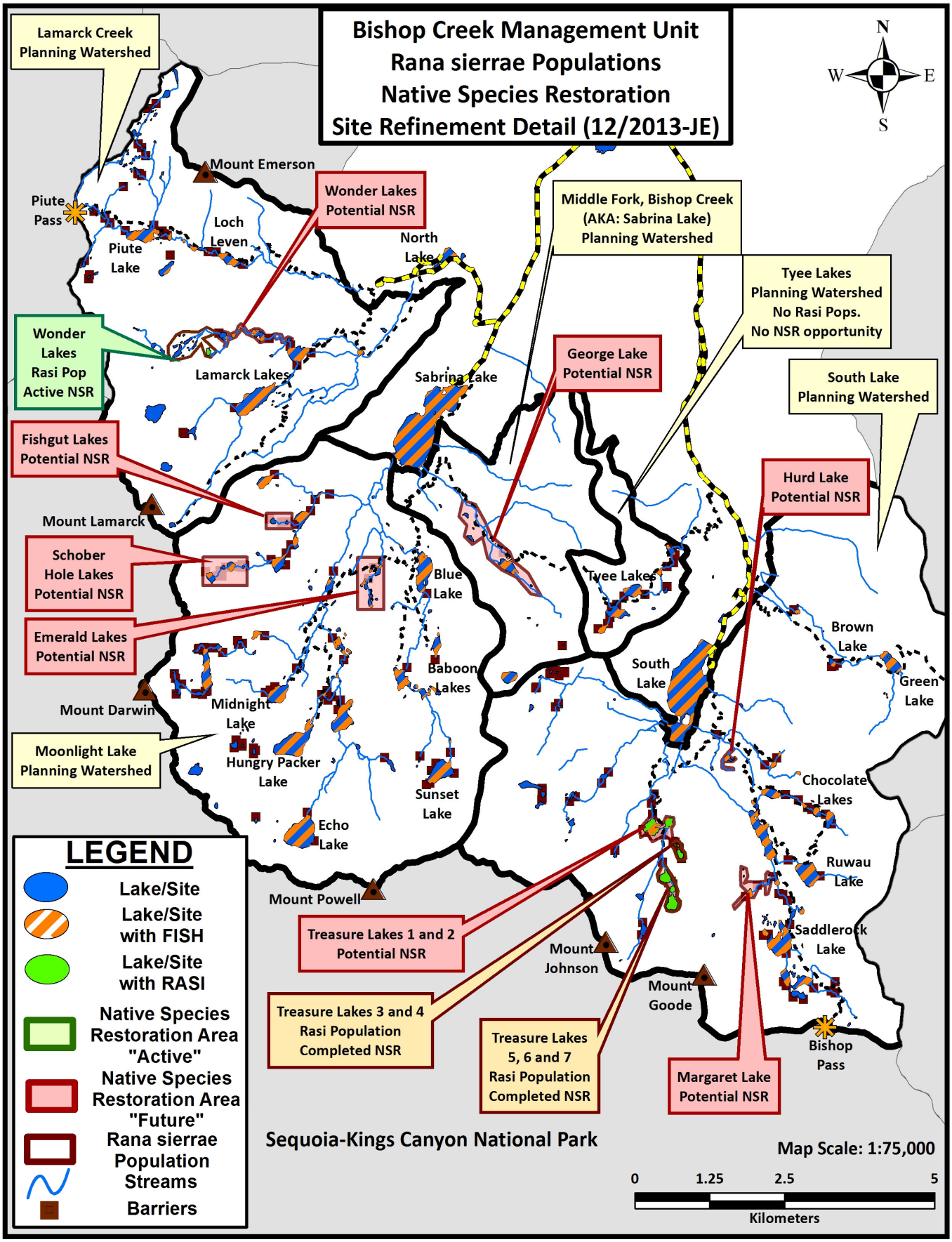

Bishop Creek Management Unit
Rana sierrae Populations
Native Species Restoration
Site Refinement Detail (12/2013-JE)
N
W
E
S
Lamarck Creek Planning Watershed
Mount Emerson
Wonder Lakes Potential NSR
Middle Fork, Bishop Creek (AKA: Sabrina Lake) Planning Watershed
Piute Pass
Loch Leven
Piute Lake
North Lake
Tyee Lakes Planning Watershed No Rasi Pops. No NSR opportunity
Wonder Lakes Rasi Pop Active NSR
Lamarck Lakes
Sabrina Lake
George Lake Potential NSR
South Lake Planning Watershed
Fishgut Lakes Potential NSR
Hurd Lake Potential NSR
Mount Lamarck
Schober Hole Lakes Potential NSR
Blue Lake
Tyee Lakes
Emerald Lakes Potential NSR
Brown Lake
Baboon Lakes
South Lake
Green Lake
Mount Darwin
Midnight Lake
Moonlight Lake Planning Watershed
Hungry Packer Lake
Chocolate Lakes
Sunset Lake
Echo Lake
Ruwau Lake
Mount Powell
Saddlerock Lake
Treasure Lakes 1 and 2 Potential NSR
Mount Johnson
Mount Goode
Treasure Lakes 3 and 4 Rasi Population Completed NSR
Treasure Lakes 5, 6 and 7 Rasi Population Completed NSR
Bishop Pass
Margaret Lake Potential NSR
LEGEND
Lake/Site
Lake/Site with FISH
Lake/Site with RASI
Native Species Restoration Area "Active"
Native Species Restoration Area "Future"
Rana sierrae Population
Streams
Barriers
Sequoia-Kings Canyon National Park
Map Scale: 1:75,000
0
1.25
2.5
5
Kilometers

Exhibit 2

ATTACHMENT 5 – MEMORANDUM: GOSHAWK SURVEY VARIATION AND CONSULTATION HISTORY
WILDLIFE RESOURCES STUDY (TERR 4)

MEMORANDUM

November 18, 2020

To:
Bishop Creek Relicensing Team
Technical Working Group – Terrestrial Wildlife
Federal Energy Regulatory Commission

From:
Brad R. Blood, Ph.D. (Psomas)

Subject: Bishop Creek Relicensing: Goshawk Surveys

The memorandum transmits to the Bishop Creek Relicensing Team, Technical Working Group – Terrestrial Wildlife, and the Federal Energy Regulatory Commission an explanation for the deviation from approved study plan for goshawk for the Bishop Creek Relicensing Project. Questions about this deviation arose during the Initial Study Report (ISR) meeting on November 11, 2020. Deviations from the approved study plan were discussed and approved by the U.S. Forest Service Inyo National Forest wildlife biologist (see below and attached e-mail: E-mail from U.S. Forest Service Inyo National Forest to Psomas dated November 18, 2020). The field team believe that existing information, supplemented with the observations described below will provide sufficient data meet the objectives of the study (see Section 6.3 of the ISR).

In 2019 access to proposed northern goshawk (NOGO) survey areas was blocked by heavy snow. Thus the protocol survey time window was missed. Per the protocol (Woodbridge and Hargis 2006) dawn acoustic surveys should be conducted in the area between March 15 and April 28. However the area was not accessible until June 2019. Alternatively, It was determined that biologists would survey the proposed NOGO areas concurrently with the summer surveys from August 5 to August 8, 2019. Specifically, Green Creek and Birch Creek were targeted because those area support the most suitable habitat for NOGO in the project study area. NOGO were observed during these surveys in Birch Creek. NOGO were not observed at South Lake or Green Creek. But given the following historic records from the CNDDB (CDFW 2020: Vicinity of Birch Creek, 2 miles west of Hwy 168, Inyo National Forest - 1 adult and 4 juveniles observed at nest site in 1993; Approximately 6 miles north of Intake 2 - Eyrie Number IN002. Active nest with one young in 1982; 1.4 miles NW of Sabrina Lake - Eyrie Number IN003. Active nest with two young in 1982), 2019 detections, and the following information provided by the Inyo National Forest (Inyo NF) wildlife biologist, it can be determined that NOGO are still active and nesting in the area.

Active nesting success was confirmed at the one known NOGO PAC within the project area. In 2019, the Buttermilk PAC was confirmed active. On August 7 at 7:45 am, biologists Jason Berkey and Cristhian Mace, observed one (1) juvenile flying overhead and begging calls were herd from at least one juvenile, which were answered by an adult. During their stand exam to find the active nest they discovered 3 non-active NOGO nests, however; the active nest was not found but is expected to be within the PAC.

Inyo NF manages the North Lake PAC which was first recorded in 1981 and has records from 1998 and 2005. The North Lake PAC was monitored in 2018 and for several consecutive years prior but resulted in no detections and nest trees did not show annual use. It is not clear why this PAC would be vacant; the surrounding habitat has had no significant changes to the landscape and recreational use persists albeit in greater user days and numbers perhaps. Monitoring in 2016, 2017, and 2018 doing acoustic surveys resulted in no detection at and near the PAC at North Lake and along all road sections traveling towards Bishop and South Lake. Over these years trees and stands of suitable habitat were walked and examined

and although nests of other birds are noticeable no raptor nests where found. NOGO is known to uses aspen grooves on the eastern Sierra for nesting and there is such suitable habitat from South Lake to Green Creek primarily along the south side. As for the Buttermilk PAC which was first recorded in 1981, no recent formal surveys by INF have occurred however reports by our local birding community suggest that this PAC is active and nesting.

This information was shared and discussed with the Psomas field team. It was determined that since the North Lake PAC is outside the project area and currently vacant surveys would not include this PAC. Since suitable habitat occurred less than 3 miles away at South Lake it was decided that acoustic surveys be focused along this section of the project area as well as at Buttermilks PAC which is well within the project boundary near McGee Creek.

Due to heavy snow fall and spring run-off, much of the project area is not accessible during the early months of spring especially PACs. The biologist decided that since the Psomas field team was very familiar with NOGOs and that they are relatively easy to see and identify as well as have unique calls, incidental detections would likely pick up this bird if present in the drainage. The biologists performed two morning surveys on two separate days in August for goshawk at Birch Creek, and South Lake/Green Creek. The biologists also listened and searched for goshawk at all facilities and watched for other signs like white wash and plucking posts during wildlife survey but none were detected. The Inyo Biologist shared with the team her experience is that chicks do not leave the PAC until September. During August on the Inyo NF chicks are highly active flying around but not leaving the PAC and very vocal awaiting the return of parents to fed them and learn to hunt and within the PAC. Acoustic surveys within suitable habitat and at PAC would have a high probability of detecting chicks up to September.

The approved study plan stated that goshawk surveys would be performed in 2020. However with the onset of COVID-19 and its concomitant restrictions, field work was postponed until it became clear that field work would be allowed during the lock-down in California. Again, by that time the window for protocol surveys had passed. And given that the goal of the surveys, to determine the presence of goshawk, was fulfilled, it was determined that protocol surveys were no longer necessary. Therefore, goshawk surveys were not performed in 2020. The above changes to the goshawk survey were discussed with the U.S. Forest Service Wildlife Biologist Ms. Kary Schlick during a phone conversation on May 7, 2020. This modification to implementing surveys to protocol was agreed upon. The result of nesting activity at Buttermilk provided the assurance that this was sufficient for Inyo NF.

Should you have any questions concerning the content of this memorandum please contact Brad Blood via e-mail: bblood@psomas.com.

Exhibit 1: E-mail from U.S. Forest Service Inyo National Forest to Psomas dated November 18, 2020

R:\Projects\KLE\3KLE010102\Wildlife Surveys\Goshawk\Goshawk Surveys Memo-111820.docx

EXHIBIT 1

E-MAIL FROM U.S. FOREST SERVICE INYO NATIONAL FOREST TO PSOMAS DATED NOVEMBER 18, 2020

From: Schlick, Kary -FS
To: Brad Blood
Cc: Irons, Sheila -FS
Subject: Goshawk Survey FERC
Date: Wednesday, November 18, 2020 2:04:30 PM
Attachments: image001.png
image002.png
image003.png
image004.png
Goshawk_Summary__BishopCkFERC_Final_111820.docx

Thanks Brad,
This looks great and I appreciate the information and summary. I am satisfied that this is final.
Cheers,

Kary Schlick
Fish & Wildlife Biologist
Forest Service
Inyo National Forest
p: 760-873-2450
f: 760-873-2458
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Caring for the land and serving people